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MEDICINE & HISTORY

Series V Volume IX N° 1 March 1987

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TRANSACTIONS & STUDIES

of

THE COLLEGE OF PHYSICIANS
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MEDICINE & HISTORY

Series V Volume IX No 1 March 1987

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On Being Two Hundred
1787–1987

WHITFIELD J. BELL, JR.

The decade of the 1780s used to be called "the critical period of American history"—a time when it was uncertain whether the newly independent states, overwhelmed by debts, coping with disorder and a score of seemingly insoluble problems, could create an effective government. Yet in many respects, in that same decade the citizens displayed constructive imagination, purpose and force. They made many advances in the 1780s to complete the independence they had won in war. Benjamin Rush, a principal founder of the College of Physicians of Philadelphia, who sensed so many truths and movements of his time, distinguished "the American Revolution" from "the late American war." The "war," he said in an address to the College in 1787, had given a "spring" to men's minds in matters of moral and scientific enterprise, releasing energy to achieve fully the "revolution."

At the lowest level this meant separating American institutions from their British foundations, planting them firmly in American soil. Thus, for example, the Anglican Church, separating itself from the Church of England by changes in organization and liturgy and by the ordination of bishops in America, became the Protestant Episcopal Church in the United States, and Presbyterians called together their first General Assembly, which formed the Presbyterian Church in the United States of America. Even the Grand Lodge of Masons of Pennsylvania, chartered by the Grand Lodge of England, declared itself independent and proposed that a grand lodge of North America be established with George Washington as Grand Master. On another level, Jedidiah Morse's *American Geography* and Humphry Marshall's *Arbustrum Americanum, the American Grove,* a catalog of native trees and shrubs, helped to establish a sense of national independence and identity. Noah Webster undertook to fashion an American language and speech, while earnest reformers, decrying foreign manners, called on Americans to adopt customs and a national costume suitable to republican simplicity. To study the science of government, now the responsibility of all, a Society of Political Inquiries was formed; its president was Benjamin Franklin.

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The "spring" that Rush saw in America manifested itself in the 1780s in a score of institutions designed to complete the "revolution." The American Philosophical Society, which had achieved international reputation by its observations of the transit of Venus in 1769, erected a meeting hall in 1785, resumed publication of its *Transactions* in 1786, and was called on to become the center of a "federal empire" of state and local scientific associations. The abolition of slavery and the education of blacks, as logical consequences of the "revolution," were promoted by voluntary associations. The Philadelphia Prison Society pioneered in obtaining humane treatment for prisoners. Both the Prison Society and the Pennsylvania Abolition Society were founded in 1787.

Nothing was more important for securing the blessings of liberty won by the "revolution" than education. Rush played a decisive role in founding both Dickinson and Franklin Colleges in Pennsylvania. He championed the education of women and sketched a system of higher education for the new nation—colleges, state universities and professional schools, and at its summit a national university where citizens would be trained for public office. In politics the "spring" produced two incomparably farsighted achievements in the summer of 1787—the Federal Constitution and the Northwest Ordinance, which assured the growth and stability of the republican empire.

Inevitably, medicine was caught up in this intellectual and social ferment. As Rush put it in his address, "before the human faculties had contracted to their former dimensions," a new medical society, "formed upon principles accommodated to the present state of society and government in America," was created in the capital of the nation. It was the College of Physicians of Philadelphia.

American Philosophical Society
104 S. 5th Street
Philadelphia, PA 19106

A Selection of Treasures from the Historical Collections of the Library of the College of Physicians of Philadelphia

THOMAS A. HORROCKS

After receiving his medical degree from the University of Edinburgh in July of 1763, twenty-eight-year-old John Morgan embarked on a grand tour of Europe. The tour was *grand* indeed, for the Philadelphian visited Holland with Boswell, obtained audiences with the King of Sardinia and the Pope, traveled for a time with the Duke of York's entourage in Italy, visited with Voltaire in Ferney, and had his portrait painted by Angelica Kauffmann. The young physician also had the pleasure of meeting Giovanni Battista Morgagni in Padua. Morgagni, who was then eighty-two years old, had been a professor at the University of Padua for sixty of those years and was one of the most renowned men of medicine in Europe.

Morgagni is considered the father of pathological anatomy owing to his monumental work, *De sedibus, et causis morborum,* which was published in Venice in 1761. Based on hundreds of case histories, including necropsy reports, Morgagni's *De sedibus* compared for the first time the clinical symptoms of a disease with the postmortem findings. *De sedibus* contains brilliant descriptions of various conditions, including heart block, angina pectoris and tuberculosis of the kidney.

When Morgan visited the celebrated anatomist in Padua, he gave him a copy of his medical dissertation. In return, Morgagni presented the young doctor with a copy of *De sedibus,* with each title page bearing an inscription by the author *(Fig. 1).*

On his return to Philadelphia in 1765, Morgan established the first medical school in America, now part of the University of Pennsylvania. Twenty-two years later he helped found the College of Physicians of Philadelphia and a year later, in 1788, he aided in the establishment of its library by donating the first books to the institution, including Morgagni's presentation copy of *De sedibus.* The College thus received its first literary treasure.

Since then the Library of the College has been acquiring rare books and manuscripts of medical importance. In 1953 the College created the Historical Collections to maintain and preserve them. To list all

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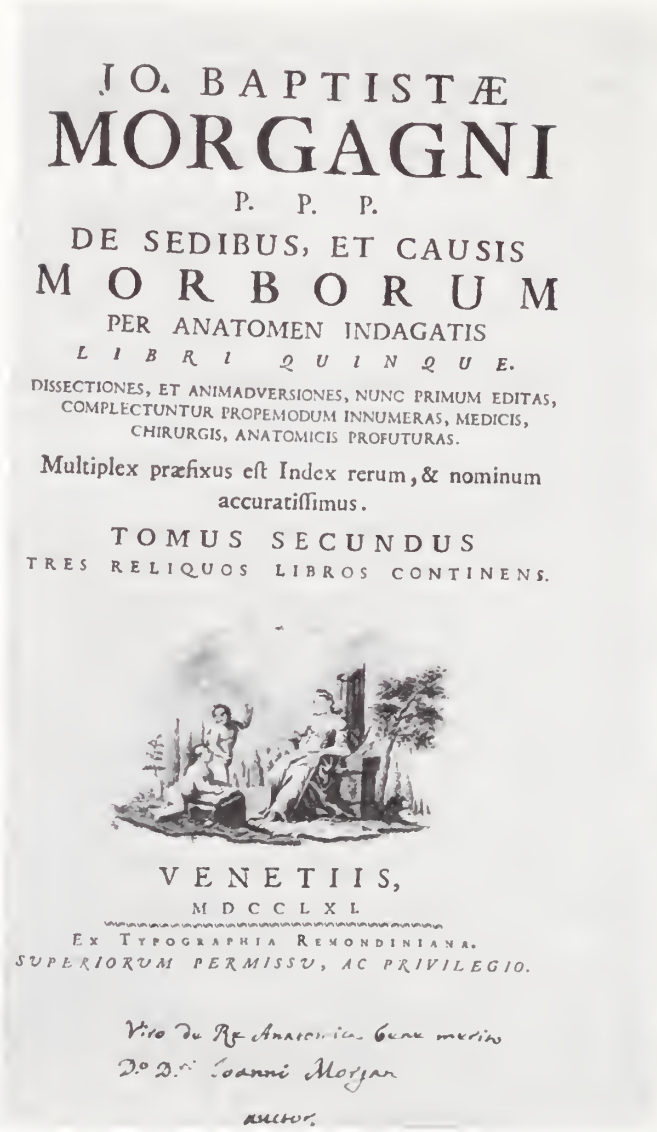

JO. BAPTISTÆ
MORGAGNI
P. P. P.
DE SEDIBUS, ET CAUSIS
MORBORUM
PER ANATOMEN INDAGATIS
LIBRI QUINQUE.
DISSECTIONES, ET ANIMADVERSIONES, NUNC PRIMUM EDITAS, COMPLECTUNTUR PROPEMODUM INNUMERAS, MEDICIS, CHIRURGIS, ANATOMICIS PROFUTURAS.
Multiplex præfixus eſt Index rerum, & nominum accuratiſſimus.
TOMUS SECUNDUS
TRES RELIQUOS LIBROS CONTINENS.
VENETIIS,
MDCCLXI.
Ex Typographia Remondiniana.
SUPERIORUM PERMISSU, AC PRIVILEGIO.
Vito Du Re Anatomico Genue merito
D.o D.r Joanni Morgan
auctor.

Figure 1. Title page of Volume 2 of Morgagni's *De sedibus* (Venice, 1761), with the author's inscription to John Morgan at the bottom.

the treasures currently in the Historical Collections would be a far greater task than this undertaking allows; therefore, I will concentrate on particularly rare books and manuscripts in the Historical Collections.

One of our oldest treasures is a fourteenth-century manuscript of Arnold of Villanova's *De infirmitatibus occulorum* (circa 1350). Arnold, who was born in Valencia, Spain, attended the University of

Montpellier, one of the outstanding seats of medieval learning. His education was complemented by extensive travel throughout France, Italy and Spain, where he learned much about the medical practices of his day. One of the most influential physicians of the Middle Ages, he is credited with over sixty works on numerous aspects of medicine, including ophthalmology. His manuscript on the infirmities of the eye, which was given to the Library of the College in 1894 by Dr. S. Weir Mitchell, is notable for containing a drawing of medieval instruments used in eye surgery *(Fig. 2).* Imagine the poor patient having to face a physician wielding needles for couching a cataract and talons for removing foreign bodies from the eye—in a time long before anesthesia.

Although the author added nothing new to the study of ophthalmology, *De infirmitatibus occulorum,* and other works on ophthalmology in the Historical Collections of the Library, make the College a leading repository of material in this field.

In addition to medieval manuscripts, the Historical Collections of the Library also contain over 430 incunabula, three of which will be

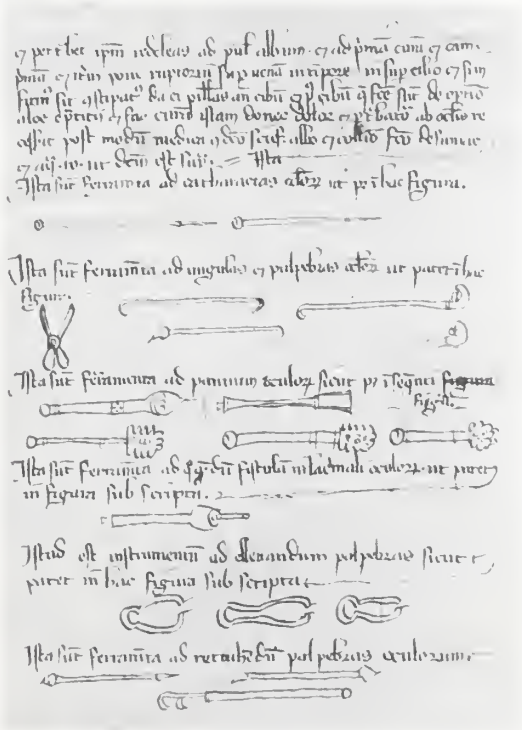


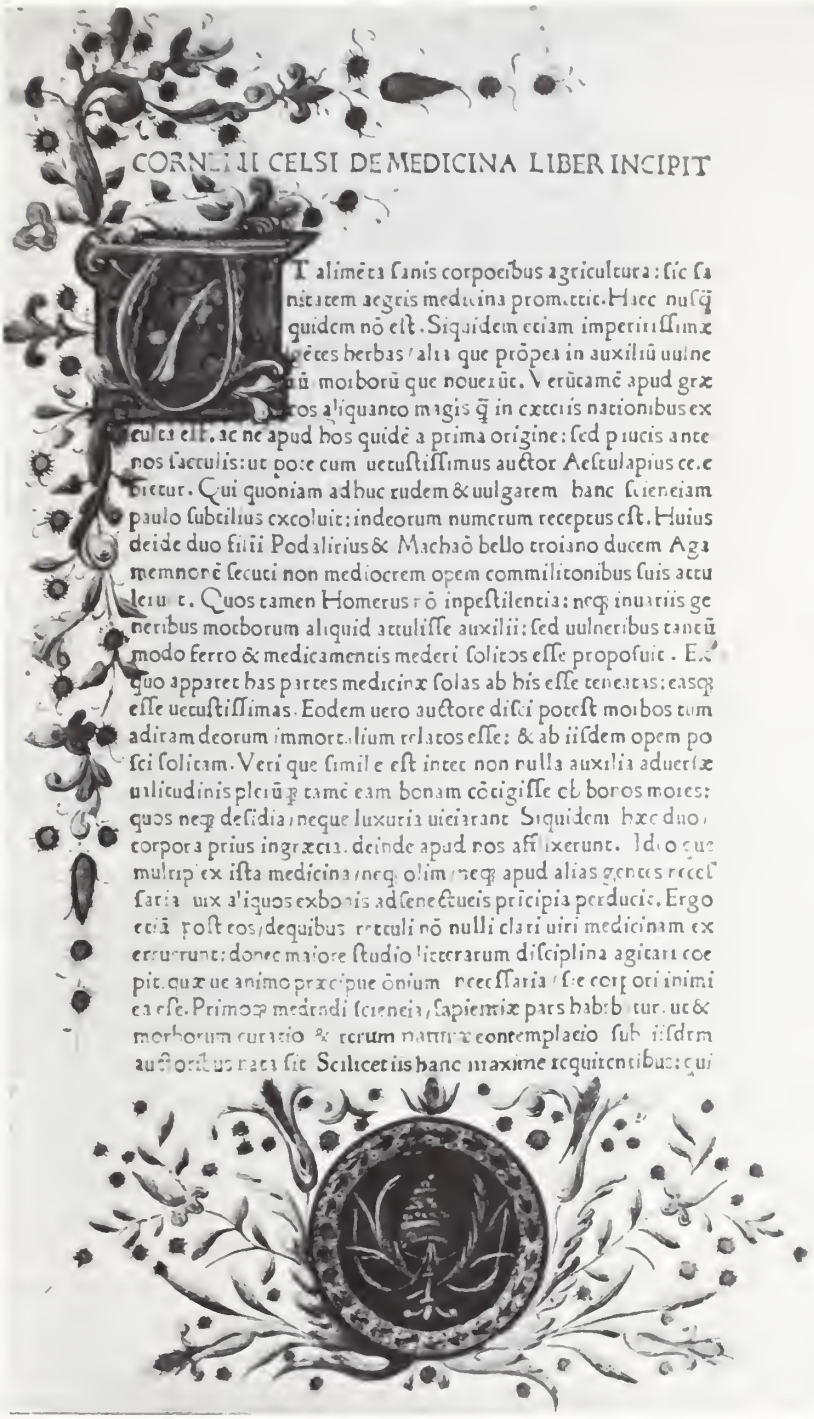
Figure 2. Medieval instruments used in eye surgery, from Arnold of Villanova's *De infirmitatibus occulorum* (ca. 1350).

discussed below. The first of these, Aulus Cornelius Celsus's *De medicina* (Florence, 1478), has a charming history. In 1913 Sir William Osler, always on the lookout for books for the College, noticed this *editio princeps* of Celsus's work listed in a Quaritch rare-book catalog and immediately cut out the item. He sent it to his good friend in Philadelphia, S. Weir Mitchell, with the following note penciled-in on the bottom: "This is a superb copy! Why not bleed the Fellows of the College? I will go $25. W. O." Although he believed the asking price of £84 "shocking," Osler admitted that it was the best copy of *De medicina* he had seen "except for the famous Grolier copy in the British Museum."

Celsus, who flourished in the first century A.D., was a Roman writer from a noble family. While he was not trained as a physician, Celsus presented the best account of Roman medicine that has survived. Written about 30 A.D., the manuscript version of *De medicina* was lost during the Middle Ages, later to be rediscovered in Milan in 1433. Celsus's *De medicina* was not only one of the first books printed in Roman type but was one of the few popular non-Arabic medical books of the fifteenth century. What makes this copy unique, however, is its beautifully illuminated first page *(Fig. 3),* and the ownership inscription on its last—that of Giorgio Antonio Vespucci, uncle and tutor of Amerigo, for whom America was named.

With Osler's influential backing, Mitchell's "bleeding" of the Fellows proved to be a success. In fact, Dr. James C. Wilson, President of the College at that time, stated that "never was blood given with better grace."

Another popular medical book of the Middle Ages was the *Hortus sanitatis* (Mainz, 1491). The *Hortus* was the last and most comprehensive of the three fundamental botanical works of the fifteenth century, following the *Herbarius* and the *Gart der gesundheit.* Although much of the text and many of the illustrations of the *Hortus* were derived from its two predecessors, it contains considerably more than these works. Besides describing more plants, the *Hortus* also contains chapters on animals, birds, fishes, stones and minerals. Rich in woodcuts, including fantastic creatures and exotic flora, the *Hortus* was one of the most important medical woodcut books produced before 1500 *(Fig. 4).* Purchased in 1923, the *Hortus* is part of an exceptionally rich assemblage of fifteenth-century herbals in the Historical Collections of the Library.



CORNELII CELSI DE MEDICINA LIBER INCIPIT

T alimẽta ſanis corporibus agricultura: ſic ſanitatem aegris medicina promittit. Haec nuſq̃ quidem nõ eſt. Siquidem etiam imperitiſſimæ gẽtes herbas / alia que prõpea in auxiliũ uulneriũ morborũ que nouerũt. Verũtamẽ apud græcos aliquanto magis q̃ in cæteris nationibus exculta eſt. ac ne apud hos quidẽ a prima origine: ſed paucis ante nos ſæculis: ut poſt cum uetuſtiſſimus auctor Aeſculapius celebretur. Qui quoniam adhuc rudem & uulgarem hanc ſcientiam paulo ſubtilius excoluit: indeorum numerum receptus eſt. Huius deinde duo filii Podalirius & Machaõ bello troiano ducem Agamemnonẽ ſecuti non mediocrem opem commilitonibus ſuis attulerunt. Quos tamen Homerus nõ inpeſtilentia: neq; inuariis generibus morborum aliquid attuliſſe auxilii: ſed uulneribus tantũ modo ferro & medicamentis mederi ſolitos eſſe propoſuit. Ex quo apparet has partes medicinæ ſolas ab his eſſe tentatas: easq; eſſe uetuſtiſſimas. Eodem uero auctore diſci poteſt morbos tum aditam deorum immortalium relatos eſſe: & ab iiſdem opem peſci ſolitam. Veri que ſimile eſt inter non nulla auxilia aduerſæ ualitudinis plerũq; tamẽ eam bonam cõtigiſſe eb boros mores: quos neq; deſidia / neque luxuria uitiarant Siquidem hæc duo / corpora prius ingræcia. deinde apud nos affixerunt. Idq; multip ex iſta medicina / neq; olim / neq; apud alias gentes neceſſaria uix aliquos exbonis adſenectutis principia perducit. Ergo etiã poſt eos / dequibus retuli nõ nulli clari uiri medicinam exercuerunt: donec maiore ſtudio litterarum diſciplina agitari coepit. quæ ue animo præcipue ônium neceſſaria / ſit corpori inimica eſſe. Primoq; medendi ſcientia / ſapientiæ pars habebatur. ut & morborum curatio & rerum naturæ contemplatio ſub iiſdem auctoribus nata ſit Scilicet iis hanc maxime requirentibus: qui

Figure 3. Illuminated first page from Celsus's *De medicina* (Florence, 1478).

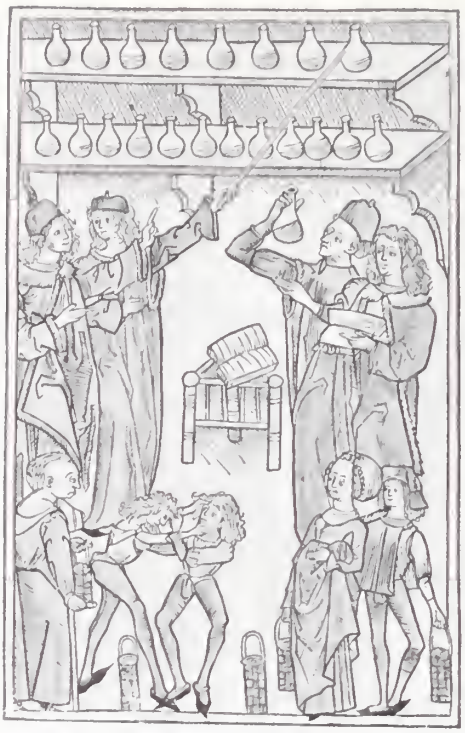


Figure 4. Woodcut from the *Hortus sanitatis* (Mainz, 1491).

A few years after the publication of the *Hortus,* the scholar-printer Aldus Manutius was producing his first major work, the five-volume set of the collected works of Aristotle, the first to appear in Greek. Today, the *editio princeps* of the *Opera* is one of the rarest and most sought-after Aldine imprints.

One of the greatest classical philosophers, Aristotle was born in 384 B.C. The son of a physician, and a student of another giant of Greek philosophy, Plato, Aristotle wrote on a wide variety of subjects, including ethics, politics, metaphysics, rhetoric, poetry, constitutional law, science and medicine. Over the past 2,000 years Aristotle has had a profound influence on scientific thought and is regarded as the founder of biology, zoology, comparative anatomy, embryology and psychology.

The handsome set of the *Opera* in the Historical Collections *(Fig. 5),* which was printed in Venice between 1495 and 1498, was donated to the College in 1915 by Henry Reed Hatfield, a Philadelphia lawyer. This set once belonged to the famous Parisian book collector, M. N. Yemeniz.

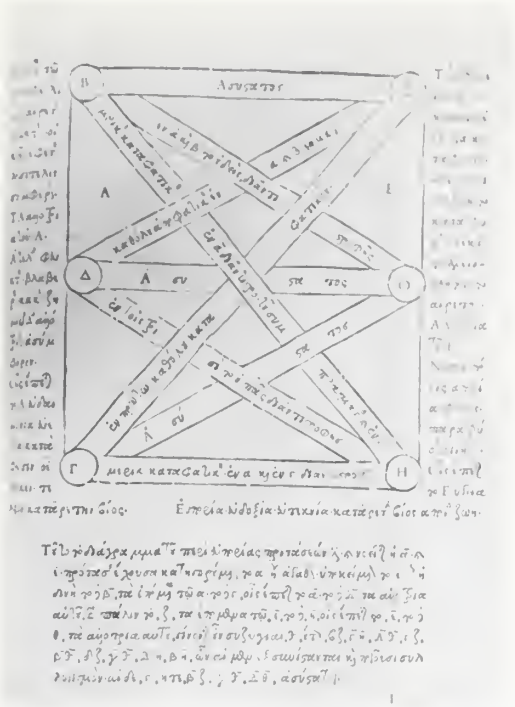


Figure 5. Diagram from Aristotle's *Opera* (Venice, 1495–1498).

Hans von Gerssdorff's *Feldtbuch der wundartzney* (Strassburg, 1517), one of the pioneering works on wound surgery to appear during the early sixteenth century, was based on the Alsatian army surgeon's forty years of experience in various military campaigns. The *Feldtbuch* is famous for its dramatic woodcuts, which seem gruesome today, graphically illustrating the medical procedures and instruments employed during Gerssdorff's time.

The new phenomenon of gunshot wounds (and other serious injuries related to warfare) brought the question of amputation increasingly to the attention of the sixteenth-century surgeon. Gerssdorff claimed to have performed over 200 such operations. Unlike many of his contemporaries, Gerssdorff did not resort to the cautery when amputating but checked the bleeding with a styptic composed of vitriol, lime, alum, aloes and nutgalls. He then covered the stump with moist animal bladder. The *Feldtbuch* contains the first illustration of an amputation to appear in a book *(Fig. 6).* The Historical Collections' copy of the first edition of the *Feldtbuch* was presented to the College in 1909 by Dr. George William Norris, a member of an old Philadelphia family and a prominent physician.

Figure 6. Woodcut depicting an amputation, from Hans von Gerssdorff's *Feldtbuch der wundartzney* (Strassburg, 1517).

The year 1543 saw the publication of two revolutionary works, Nicolaus Copernicus's *De revolutionibus orbium coelestium,* which established the notion, heretical at the time, of the sun as the center of the universe, and Andreas Vesalius's *De humani corporis fabrica,* which was the first modern anatomic textbook. It is the latter work that concerns us here.

Born in Flanders in 1514, Vesalius came from a family of distinguished physicians. After studying medicine in Paris, he went on to Padua, where he received his medical degree in 1537, and where he became Professor of Surgery and Anatomy. Vesalius started out in medicine as a devoted follower of the Galenic tradition of anatomy, which was based on the dissection of animals. He soon realized, however, that human anatomy could not be properly studied without performing human dissections. The *Fabrica,* based on Vesalius's dissections, inaugurated the study of scientific anatomy.

This magnificent volume is famous for its full-page skeletons (Fig. 7), but its other plates are no less splendid, showing for the first time the human body in accurate detail. The handsome woodcuts were possibly the work of Jan Stephan Kalkar, a student of Titian. The illustrations in the *Fabrica* had such a dramatic impact that anatomists copied them for the next three centuries.

One fine copy of the *Fabrica* came to the College as a gift from the eminent nineteenth-century Philadelphia physician and teacher, Charles D. Meigs.

If one had to choose the rarest of the rare in the Historical Collections, it would be a hard choice between Hieronymus Fabricius ab Aquapendente's *De formato foetu* (Venice, 1606)* and William Harvey's *Exercitatio anatomica de motu cordis et sanguinis in animalibus* (Frankfurt, 1628). Harvey would probably have the edge because of his dramatic impact on the history of medicine, but the copy of the former work in the Historical Collections, as we shall see, is indeed a scarce treasure.

*Although the title page of this volume gives the imprint as Venice, 1606, the colophon lists an imprint place and date of Padua, 1604.

Figure 7. Anterior view of the skeleton from Vesalius's *Fabrica* (Basel, 1543).

Born in 1533 in Aquapendente, a small village between Rome and Siena, Fabricius studied medicine under the celebrated anatomist, Gabriel Fallopio, in Padua, and later succeeded his teacher as Professor of Surgery and Anatomy there. Fabricius's most famous work was *De venarum ostiolis* (Padua, 1603), in which he first described the valves of the veins in detail. His work in this area greatly influenced his star pupil, William Harvey.

Fabricius's work on the formed fetus is a splendid comparative study of the developmental stages of human and animal fetuses. The first work of its kind, *De formato foetu* contains the best illustrations up to that time of the human gravid uterus and the human placenta. The copy of the first edition in the Historical Collections is unique, however, for having thirty bound-in folio plates, some of double size, reproducing in colors (probably gouache or tempera) most of the illustrations in the text *(Fig. 8)*. Only one other set of these color plates is known to exist. Besides these plates, this spectacular volume

Figure 8. The fetus of a horse. One of the rare color plates from Fabricius's *De formato foetu* (Venice, 1606).

also contains four polychrome woodcuts in folio for Gasparo Aselli's historic work on the lacteal vessels, *De lactibus* (Milan, 1627). Some of them are represented in various stages of development from ink drawing to uncolored woodcut. The Aselli plates were the first colored illustrations to appear in an anatomical text. As if this were not enough, this volume includes two anatomical fugitive sheets of a male and female, with superimposed flaps, printed in Venice in 1587, and three 1613 anatomical sheets, also with flaps.

This superlative copy was acquired in 1901 when the College purchased the library of Dr. John Stockton Hough, of Trenton, New Jersey, who had assembled a marvelous collection of works in the area of embryology and human reproduction.

The first edition of William Harvey's *De motu cordis* is a small, plain, poorly printed volume containing numerous typographical errors. Yet, despite its defects and its physical unattractiveness, *De motu cordis* is considered the greatest book in the history of medicine, for it was in this work that Harvey announced to the world his landmark discovery of the circulation of the blood *(Fig. 9)*.

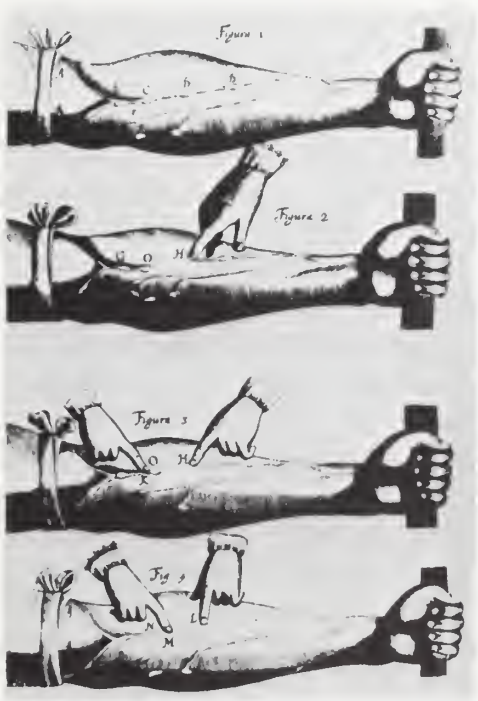


Figure 9. Woodcuts used by Harvey to demonstrate the circulation of the blood in *De motu cordis* (Frankfurt, 1628).

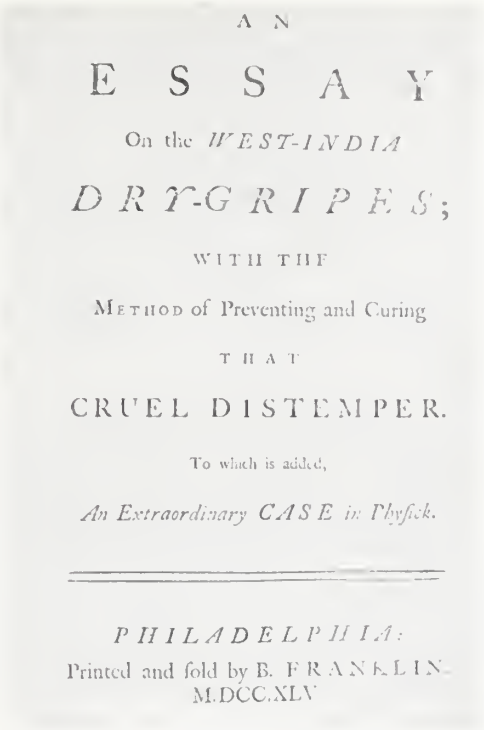
The son of a yeoman farmer, Harvey was born in 1578 and later studied medicine at the University of Padua under Fabricius of Aquapendente. On the completion of his studies there, Harvey returned to his native England and received his medical degree from Cambridge in 1602. Before the publication of his masterpiece, there was no clear understanding of the circulatory movement of the blood. The heart and the arteries were considered a separate system from that of the veins. Influenced by the work of Fabricius on the valves of the veins, Harvey performed numerous experiments on many classes of vertebrate and invertebrate animals over a period of several years and was able to demonstrate clearly the connection between the arteries, the heart and the veins in the circulatory system. He proved that the heart acts as a pump and keeps the blood flowing in one continuous direction.

The greater part of the first edition of *De motu cordis* was printed on thin paper of inferior quality, which has long since turned brown and begun to crumble. A few copies, however, were printed on a more substantial, thick paper. The copy in the Historical Collections of the Library is one of three thick paper copies still in existence. This copy was once in the library of the noted nineteenth-century Philadelphia physician-bibliophile Samuel Lewis, who donated this volume to the College along with 11,000 other medical books.

The copy of Thomas Cadwalader's *An Essay on the West-India Dry-Gripes* (Philadelphia, 1745) in the Historical Collections of the Library is one of a kind. Cadwalader's work, one of the earliest medical books published in America, was printed and sold by his good friend Benjamin Franklin. Our volume is the only known copy in existence with two prefaces, one of which was suppressed *(Fig. 10)*.

Born in Philadelphia in 1708, Cadwalader studied medicine at the University of Rheims in France and under William Cheselden in England, and later practiced in Philadelphia and southern New Jersey. In his classic account of the "dry-gripes," which was a form of lead poisoning resulting from drinking punch that had been distilled through lead pipes, Cadwalader recommended the use of mild cathartics and opium as opposed to the usual treatment of mercury and strong purgatives, a treatment almost as bad as the malady it was supposed to cure.

Cadwalader had completed the original preface to his essay in March of 1745 and had it set in type. Someone, perhaps Franklin, found the



A N

E S S A Y

On the *WEST-INDIA*

DRY-GRIPES;

WITH THE

METHOD of Preventing and Curing

THAT

CRUEL DISTEMPER.

To which is added,

An Extraordinary CASE in Phyſick.

PHILADELPHIA:

Printed and ſold by B. FRANKLIN.

M.DCC.XLV

Figure 10. Title page of Thomas Cadwalader's *Essay on the West-India Dry-Gripes* (Philadelphia, 1745).

defensive and rambling preface unacceptable. Cadwalader, possibly with the assistance of Franklin, wrote a new preface, and this one appeared in the published volume. The Historical Collections' copy of Cadwalader's *Essay* was presented to the College by Dr. Samuel Lewis. Also in the Historical Collections is Cadwalader's manuscript draft of this work. The latter was donated to the College by S. Weir Mitchell in 1914.

In the area of *ars medica* there are a number of gems in the Historical Collections besides Vesalius. One of them, Jacques Fabien Gautier Dagoty's *Myologie complette en couleur et grandeur naturelle, composée de l'essai et de la suite de l'essai d'anatomie, en tableaux imprimés* (Paris, 1746–1748), is notable for its four-color mezzotints by Dagoty, the first anatomic illustrations in color to appear in France.

During the early years of the eighteenth century a German artist, Jakob Christof Le Blon, invented the three-color process for printing. Inspired by the color theories of Isaac Newton, Le Blon used three separate plates inked in red, yellow and blue, printed over one another.

Le Blon later added black ink to the process, thus inventing four-color printing, which, with many improvements and modifications, is still used today. After Le Blon's death, his student, the French engraver-printer, Dagoty, claimed the four-color process as his own and produced some of the most attractive anatomical atlases ever published. Making up in beauty what they may lack in accuracy, Dagoty's works are considered landmarks, not only in the history of art but in the history of medical illustration as well. His sumptuous *Myologie complette,* based on the dissections of the French anatomist Joseph Guichard Duverney, includes the famous "anatomical angel" mezzotint *(Fig. 11).*

Dr. John L. LeConte, a Philadelphia physician noted for his work in entomology and geology, presented a number of Dagoty's works to the Library of the College, including the *Myologie complette.*

Paolo Mascagni's posthumous anatomical work, *Anatomiae universae icones* (Pisa, 1823–1832) was possibly the largest and one of the most spectacular atlases ever produced. Though a copy of this scarce work is not in the Historical Collections of the Library, a copy of Francesco Antommarchi's famous (or infamous) piracy of Mascagni's great atlas is, and its history is quite fascinating.

Figure 11. The "Anatomical Angel" mezzotint, showing the muscles of the back, from Dagoty's *Myologie complette* (Paris, 1746–1748).

Before his death in 1815, the Italian anatomist Mascagni had prepared a draft and sketches for a complete life-size anatomy of man. On his death, the projected anatomy was put into the hands of Mascagni's student, Antommarchi. While working on the massive project, Antommarchi was called to St. Helena to attend to his friend, the exiled Napoleon, taking with him copies of Mascagni's plates. While at St. Helena, Antommarchi had a falling-out with Mascagni's heirs, who in turn entrusted the project to the artist Antonio Seratoni, who later produced the magnificent *Anatomiae.* Meanwhile, Antommarchi, who still possessed copies of the engravings, had lithographs made from them by Comte Charles Philibert de Lasteyrie, who founded the first lithograph establishment in France, and his successor, Brégeaut, for his own anatomy, *Planches anatomiques du corps humain executées d'après les dimensions naturelles accompagnée d'un texte explicatif* (Paris, 1826). In this work, Antommarchi failed to give any credit to his former teacher, Mascagni. Despite the fact that it is a piracy, as well as being inferior to Mascagni's stupendous atlas, Antommarchi's work is an amazing production, breathtaking in its size and beauty *(Fig. 12).*

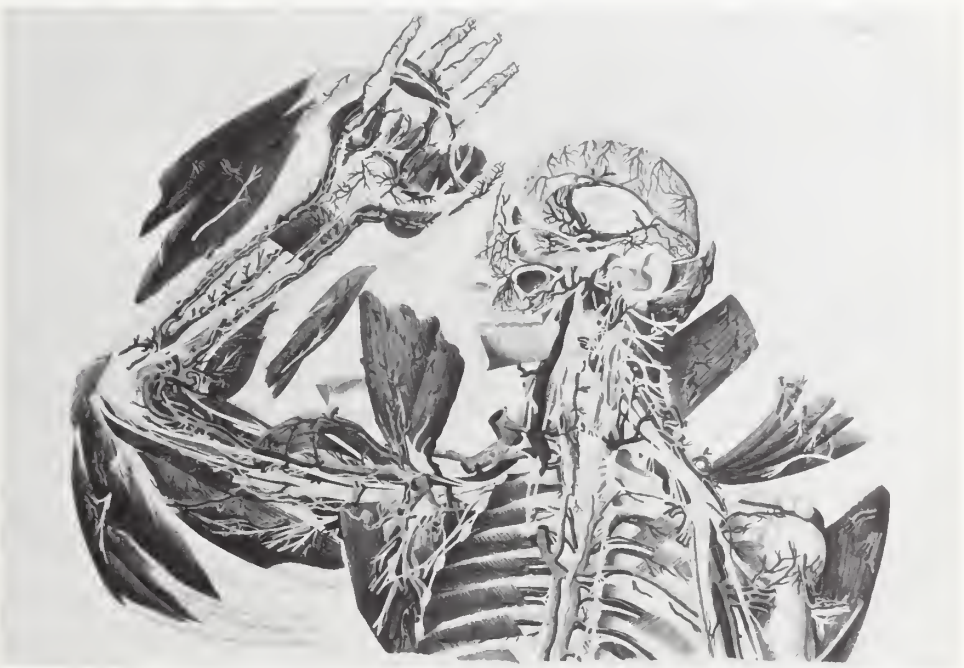


Figure 12. One of the splendid lithographs from Francesco Antommarchi's *Planches anatomiques* (Paris, 1826).

The copy of Antommarchi's work in the Historical Collections once belonged to Napoleon's second wife, the Empress Marie Louise (her monogram graces the spines of both the text and the atlas), and was given to the College in 1933 by Dr. Alfred Stengel, who served as President of the College from 1934 to 1936.

Today, the American Medical Association is recognized as one of the most powerful professional organizations. This was not always the case, however, for the AMA was not an effective organization during the early years of its existence. Founded in 1847, the AMA did not start to exert its influence on behalf of the goals set forth in its constitution — "cultivating and advancing medical knowledge, . . . elevating the standard of medical education, . . . promoting usefulness, honour, and interests of the Medical Profession, and . . . enlightening and directing public opinion in regard to the duties, responsibilities and requirements of medical men"—until the late nineteenth century. The manuscript copy of the Association's constitution now rests in the Historical Collections of the Library.

American medicine during the 1840s was in a state of transition. A new generation of physicians, some of whom had studied in Paris, were espousing a new scientific medicine and rejecting the old theories of the Edinburgh-trained generation and their heroic therapeutics. Many of this new generation were not only alarmed at the rise of the untrained, the empiric and the quack, but were also embarrassed at the deplorable state of medical education.

On 5 May 1846 representatives of medical societies and colleges from sixteen states met in New York City, at the request of the State Medical Society of New York, to organize a national convention of physicians to address the many problems facing the profession, particularly the issue of medical education. The delegates agreed to meet the next year in Philadelphia, where the first organized meeting of the AMA was held at the Academy of Natural Sciences on 5 May 1847. As proposed by a committee a year earlier in New York, a constitution was adopted and signed by the delegates (Fig. 13). The first signature was that of the Philadelphian, Dr. Nathaniel Chapman, who was the first President of the AMA and also a Fellow of the College.

The manuscript volume of the constitution, which was signed by the delegates to the annual meetings of the AMA through 1860, was donated to the College in 1905 by Dr. William Biddle Atkinson, the longtime secretary of the Association.

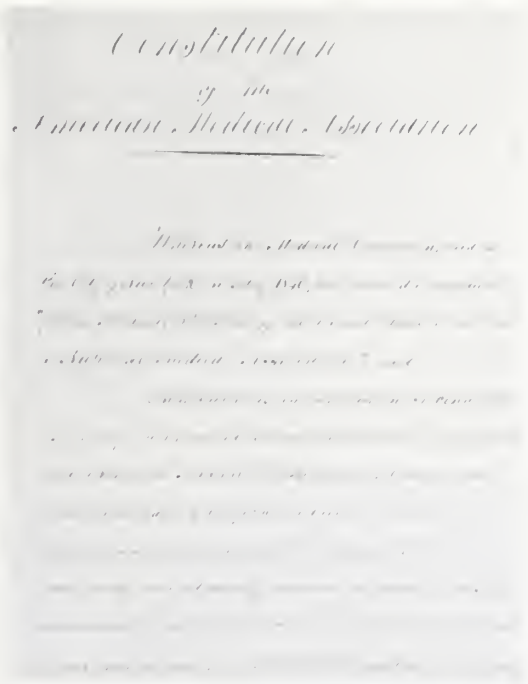


Figure 13. The Constitution of the American Medical Association. Manuscript.

At the core of any great library collection specializing in the history of medicine are its journal holdings. Many of the landmark achievements in medicine were first communicated to the world through journals. The worldwide reputation of the Library of the College of Physicians and of its Historical Collections particularly, in part results from its superb collection of early medical journals, both American and European. One such journal from the latter group, *Sitzungsberichte der Physikalischmedicinischen Gesellschaft zu Würzburg,* provides a perfect example of a great discovery that forever changed the practice of medicine when it was announced for the first time through the pages of a periodical. In its 1895–1896 issue, this journal published a two-part communication from Wilhelm Conrad Röntgen, entitled "Ueber eine Neue Art von Strahlen," in which the German physicist announced his discovery of the X ray.

Röntgen's discovery was made by accident. On the night of 8 November 1895, in a darkened laboratory in Würzburg, Röntgen was experimenting with a lightproof Crookes tube in order to study the conduction of electricity through gases. During the experiments Röntgen was astonished to find that he could produce shadows of solid

objects and a fluorescent light on a nearby chemically treated screen. After discovering that these strange rays could pass through materials of increasing density, such as a book, wood and a metal plate, Röntgen placed his hand in the path of the rays and saw the bones of his hand in silhouette on the screen.

Röntgen, Professor of Physics at the University of Würzburg, announced his historic discovery to the Würzburg Physical and Medical Society in two papers, the second of which included one of the earliest photographs of an X ray, showing the hand of his colleague, the anatomist Albert von Kölliker *(Fig. 14)*. The worldwide response to Röntgen's discovery was immediate and brought him instant fame. In 1901 he won the first Nobel Prize in Physics.

Figure 14. One of the earliest radiographs, showing the hand of the German anatomist, Albert von Kölliker, from Röntgen's second communication on his discovery of the X ray.

The year 1988 will mark the 200th anniversary of John Morgan's first donation of books to the College of Physicians. What better way to celebrate the bicentennial of the Library of the College than to exhibit some of its rarest items? The College will be doing just that when it joins fifteen other member institutions of the Philadelphia Area Consortium of Special Collections Libraries in a cooperative exhibit, tentatively entitled "Legacies of Genius: A Celebration of Philadelphia's Special Collections," to be held at the Library Company of Philadelphia and the Historical Society of Pennsylvania from 18 April to 25 September 1988. The Consortium will mount an exhibit of more than 200 of the most significant books, manuscripts and works of art on paper selected from its collective holdings. Appropriately, the rarities discussed above have been chosen to represent the Historical Collections of the Library.

Historical Collections of the
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The Well-Placed and the Misplaced *Philosophes,* Benjamin Rush of Philadelphia and Benjamin Waterhouse of Boston

PHILIP CASH

The period 1760 – 1820 witnessed American overthrow of British rule, the creation of a new republic, and the forging of an ideology to explain, advance and vindicate these achievements, which constituted both a threat to the established orders of Europe and an inspiration to those who would challenge these orders. In all of this, physicians played a surprisingly disproportionate and very positive role. During this same period physicians were also busily engaged in establishing our earliest medical schools, societies, hospitals and journals, the institutions on which the American medical profession eventually would come to base itself.

The role played by doctors in the saga of independence and nation building and the founding of modern medical institutions gave the leadership of the American medical profession of this era a sense of élan and self-confidence as well as considerable influence in both the public and private life of the new nation. In the forefront of this medical leadership were two men who might best be termed "medical *philosophes.*" They were Benjamin Rush of Philadelphia and Benjamin Waterhouse of Boston.[1]

The Philosophe

The use of the term "medical" here is self-evident; both of these men were leading physicians. The term *"philosophe"* needs explaining. The American *philosophes* — medical or otherwise — were true children of the Enlightenment. They had a ubiquitous curiosity, a love of verbal aggressiveness, and an abiding faith in the efficacy of science, experience and reason. They also had a strong inclination to employ these attributes in constructing theoretical systems to classify and explain all things to mankind. They possessed a strong sense of morality, but with emphasis on a rational-empirical rather than a theological framework. Despite periodic effusions of pessimism, they were hard-core optimists, although not romantic utopians. This is particularly evident in their conviction that human progress and personal happiness were possible through the creation of social, political and

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economic institutions that were based on reason and experience rather than simply being inherited. The American *philosophes* also shared certain personality traits. They were hardworking, had a strong sense of duty and possessed considerable moral courage. However, with the notable exception of Benjamin Franklin, they lacked a sense of humor and were overly sensitive to criticism.

While both Rush and Waterhouse were substantial figures of the American Enlightenment, they operated in far different environments.[2] Despite being engaged in almost constant controversy, Rush throve in wealthy, pluralistic and cosmopolitan Philadelphia, then the Athens of America.[3] Waterhouse, however, found himself estranged and besieged in homogeneous, hard pressed, and chronically combative Boston, then America's Sparta.[4] Actually, the Newport in which Waterhouse was born and nurtured was much more like Philadelphia than the grim metropolis of the Bay Colony some 90 miles to the north.[5] In fact, the two leading urban centers of colonial New England had a visceral animosity toward each other. At the time of the Stamp Act crisis James Otis referred to Newport's Tory Junto as a:

> little, dirty, drinking, drabbling, contaminated knot of thieves, beggars, and transports . . . collected from the four winds of the earth, and made up of Turks, Jews, and other infidels, with a few renegado Christians and Catholics.[6]

True, Otis was speaking of Newport's Tories, but there can be little doubt that he and a majority of Bostonians thought of the whole of Newport in much the same way.

Varied Roles

To better understand these two men, their environments and American medicine and civilization during the Revolutionary and Federalist eras, the rest of this paper will concern itself with an analysis of the role of Rush and Waterhouse in the following three areas: (1) politics, morality and reform; (2) science, and (3) medical institutions.

The intellectual obsession of the early United States with the vital importance and close relationship of politics and morality was based on several factors. First, America was an infant republic in a world that looked on that form of government with hostility and contempt. Second, Americans were acutely aware that both history—or experience as it was called — and political theory demonstrated that republics were fragile entities, heavily dependent on the superior wisdom and

virtue of their citizenry. Lastly, Americans of that era were deeply immersed in the evangelical Protestant concept that politics and economics were not just vehicles to attain certain goals but highly moral activities as essential to salvation as Scripture reading and churchgoing. Both Rush and Waterhouse reflected these concerns in their writings and efforts. They also subscribed to the idea that the health of the body was inextricably linked to that of the mind and soul and that all of these were the proper concern of the physician as well as that of the minister and statesman.[7] However, while both Rush and Waterhouse operated within the same network of ideas, Waterhouse was more influenced by secular rationalism and Rush, by evangelical Protestantism. Indeed, Rush represents a very interesting and thought-provoking overlapping of the ideas and attitudes released by the religious upheaval known as the Great Awakening and the political upheaval of the Revolution. It is also important to remember that in both religion and politics Rush really was not a radical but a nonconformist.

Dissipation was a growing concern of the young republic, and both Rush and Waterhouse wrote works of moral exhortation wedded to scientific principles and medical imperatives that addressed this concern. Waterhouse's most popular work was *Cautions to Young Persons Concerning Health . . . Shewing the Evil Tendencies of the Use of Tobacco . . . with Observations on the Use of Ardent and Vinous Spirits.* This work was based on an 1804 lecture—one might even call it a medical sermon—delivered to the students of Harvard, warning them against the use of tobacco and alcohol and attributing a dramatic increase in the incidence of consumption (tuberculosis) and nervous disorders among Harvard students to their "hectic habits" and their excessive indulgence in wine, rum and cigars. He reminded these future leaders of New England that, while God sent acute diseases, man created chronic ones. The work went through eight editions—five American, one English, one French and one German.

Rush, who really was opposed only to imbibing grain alcohol, wrote his first temperance tract in 1772 when he was a fledgling in the public arena. In 1789 he wrote a surprisingly modern attack on the use of tobacco. However, a far more important work was his *Inquiry into the Influence of Spiritous Liquors Upon the Human Body, and their Influence Upon the Happiness of Society,* first printed around 1784, revised in 1804 and reprinted many times both here and abroad. The tracts of both Rush and Waterhouse were eloquent and observant and

influenced American and European temperance movements for several generations. However, it was Rush's second tract that was the most astute in analyzing the clinical manifestations of the use of alcohol and the destructive effects of alcoholism on the fabric of the family and society. It should be remembered, though, that both Rush and Waterhouse reflected the rational moderation of the Enlightenment and advocated temperance and not prohibition as did the zealous romantics of the Age of Jackson.[8]

Social Welfare

As humanitarians and as physicians in a seafaring environment, both Rush and Waterhouse were active in the founding of Humane Societies, another expression of Enlightenment reform.[9] These societies first appeared in Europe. John Coakley Lettsom, the heir to Dr. John Fothergill and a good friend of both Rush and Waterhouse, was one of the founders of the Royal Humane Society in 1774. These societies were designed to aid seamen and to introduce and popularize methods of revivifying victims of suspended animation caused by drowning, choking, hanging and sunstroke. However, this was a secondary activity for the hyperactive Rush, while Waterhouse played an important but uneven role. In 1782, after returning to Newport from Europe, Waterhouse, in response to the drowning of several young people in Newport harbor, unsuccessfully urged the founding of a humane society in Rhode Island. In 1785 he worked with the visiting blind scientist, Dr. Henry Moyes of Edinburgh, in drawing up plans for the Humane Society of the Commonwealth of Massachusetts. However, jealous of the predominant influence of Dr. John Warren, he declined to serve as a trustee and withdrew from active participation for a number of years. Still, in 1790 he was invited to give the Society's annual discourse. His address on *The Principle of Vitality* correctly urged the importance of prolonged stimulation in cases of suspended animation but was marred by a dogmatic insistence on the vitalist principle. On receiving a copy of the address, John Adams gently chided his friend about this:

> Pray, where is the Evidence of the Existence of a subtle Electric fluid which pervades the Universe? and if that were proved, where is your authority for saying that such an Electric fluid is the Cause of Life? Why may it not as well be Magnetism? Steam, or Nitre? or fixed Air? These are all tremendous Forces in Nature.[10]

Both Rush and Waterhouse regularly monitored the moral health and civic needs of their country and, beginning in 1812, Waterhouse for a while lent his formidable pen to the partisan interests of the Democratic-Republicans. However, it was Rush who spent a far greater amount of time, effort and ink as a political and social activist. Between 1773 and 1790 medicine was Rush's occupation, but politics and social reform were the passion-filled centers of his life. Although both he and his mother were slave owners, Rush worked sporadically but effectively first to mitigate and then to abolish this wretched contradiction of the new republic.[11] Prison reform also drew his attention.[12] He asserted that "the only design of punishment is the reformation of the individual," and he strenuously inveighed against both public and capital punishment. He was one of the first to call for the nineteenth-century style penitentiary which, while noble in intent, proved to be far less than this in actuality. Education, a lodestar for both Calvinism and the Enlightenment, was a particularly important concern of Rush's.[13] He saw education as a vehicle to produce "republican machines" to bring about a harmonious and industrious nation based on virtue, patriotism and utility. As David Freeman Hawke observed:

> Others, notably Thomas Jefferson, contemplated colleges, but Rush was the first to create one (Dickinson) after the Revolution. Others talked about a free public-school system but Rush alone developed a detailed plan for one. Others spoke of educating women, but only Rush prepared a syllabus. The first six presidents of the United States called for a federal university, but only long after Rush had advanced the idea.[14]

In addition to these concerns, Rush was America's most significant champion of this era for the better understanding and treatment of the insane and better medical care for the poor, but these can best be appreciated in the context of the founding of early American medical institutions.

Politics

Besides being a highly effective political agitator and pamphleteer, Rush also held political office. Between 1774 and 1776 he served on Philadelphia's Committee of Inspection and Observation and the Pennsylvania Provincial Congress, where he played an aggressive role in advancing the Whig-Patriot cause, and then in the Continental Congress, where he gained civic immortality as a signer of the Declaration of Independence. However, he was a bitter opponent of the

radically democratic and much maligned Pennsylvania Constitution of 1777 and remained its most persistent and effective critic during its thirteen years of existence. In 1787 Rush was elected to the Pennsylvania convention that ratified the new national constitution. After that he found himself frozen out of both Pennsylvania and national politics. This caused him not only to turn his full energies to medicine but also to sour on his former passion. In his *Autobiography* he noted:

> To my sons I bequeath a father's experience, and I entreat them to take no public or active part in the disputes of their country beyond a vote at an election. If no scruples of conscience forbid them to bear arms, I would recommend to them rather to be soldiers than politicians, should they ever be so unfortunate as to live in a country distracted by a civil war. In battle men kill without hating each other; in politics men hate without killing, but in their hatred they commit murder every hour of their lives.[15]

Needless to say, Rush was deeply upset when his most able son, Richard, became a prominent political activist.

While Waterhouse studied history and the law of nations at Leyden, was very much an interested political observer and was for a brief time a skilled partisan publicist for the Democratic-Republicans, his political activities were far more constricted than Rush's. Some of the reasons for this are obvious. He was in Europe — indeed, England — when the holy war for independence was being fought and political careers of that generation were being forged. He lived in a hostile environment. His true passion was neither politics nor medicine, but science. However, there is one less obvious reason that I think does much to explain Waterhouse's entire career, and that is that the business of revolution and nation building in America was the work of aristocrats such as Washington, Jefferson, and Hancock or self-made men such as John Adams, Franklin, and Rush. However, during his formative years, Waterhouse was a creature of *patronage,* a type far more typical of Europe. During his youth he was the pampered protégé of a group headed by Judge Robert Lightfoot and Abraham Redwood, Newport's great benefactor. While in Europe he was supported and promoted by his kinsman, Dr. John Fothergill of London, a man of wealth and one of the leading medical and scientific figures of his age. Although he would remain throughout his life a firm patriot and liberal, Waterhouse would never fully recover economically or psychologically from the loss of this Old World type of support. One

question: Would Waterhouse have received such support in Philadelphia?

Two final observations on Rush, Waterhouse and early American politics. One is that, like many another American of this age, both men had their political principles radicalized by their European experiences. The other is that at critical junctures in their lives, both Rush and Waterhouse benefited from federal patronage. In 1797 when Rush was in straitened circumstances, his longtime friend, President John Adams, at the behest of Rush's uncle-in-law, Elias Boudinot, appointed Rush to the post of Treasurer of the United States Mint, a position he held until his death. In 1807 President Thomas Jefferson bypassed his political supporters in Boston and appointed Waterhouse chief physician to the United States Marine Hospital in Charlestown as a reward for his work in advancing the practice of vaccination. In 1813 President James Madison, who earlier had removed Waterhouse from his position in the Marine Hospital for what appear to have been relatively minor transgressions, now appointed him first as a hospital surgeon, then as medical superintendent of all the military posts in New England. By this time Waterhouse was a popular penman for the Democratic-Republican cause.

Appeal of Science

If Rush had an early passion for politics, Waterhouse had a much longer one for science.[16] It was a passion that had an adverse effect on his medical practice and teaching — this despite the warning of his benefactor, Fothergill, to regard scientific pursuits "only as an agreeable adjunct to the healing art."[17] While both Rush and Waterhouse were important popularizers of science in America, Waterhouse was much better suited for scientific investigation. He had greater patience, tenacity of purpose and a greater willingness to entertain contrary arguments and evidence. He also spent more time on intermediate questions that connect fact and theory. Had he lived among the greater institutional and human resources that Philadelphia at this time devoted to science, Waterhouse almost certainly would have made better use of his talents in this area. Although he had an inclination toward pure science, Waterhouse fell well within the pattern of the scientific dynamics of the American Enlightenment in retaining a fondness for systems and a deep commitment to applying the fruits of scientific investigation to utilitarian ends.

In his defense to the Harvard Corporation at the time of his dismissal, Waterhouse noted that:

> besides fulfilling my duties as your Medical Professor, I brought forward *three things* which had for their end Public utility more than private emolument. The first was a *System of Lectures on Natural History,* being the first of its kind in the United States. The *second* which followed after this period was the formation of an extensive *Cabinet of Minerals* and the 3[d] which followed 10 years after, the introduction of *vaccination* & defending it . . . in its disputed march through an (*sic.*) host of enemies for nearly ten years more.[18]

He might have added a fourth—pressuring Harvard to found a botanic garden. Notice, though, that the things that Harvard's first professor of the theory and practice of physick was most proud of all involved science, while only one—his work in vaccination—directly involved medicine. Still, it was his work related to vaccination that marked his greatest achievement as scientist, physician and public benefactor. One can readily accept all the shortcomings of Waterhouse in relation to his work in promoting vaccination that Blake so ably described—his greed, vanity, combativeness and dissimulation—and still recognize his right to be called "the Jenner of America."[19] No one in the United States during this period wrote so much of importance about vaccination or tried so hard to answer scientifically more questions on the nature and efficacy of this procedure. He also constantly stressed the need for governmental agencies to maintain adequate supplies of pure vaccine and to support widespread and inexpensive vaccination. He was actively engaged in these concerns until at least the 1820s. In 1802 he and James Jackson, who represented the vanguard of a new and more scientifically sophisticated generation of Boston physicians, were the chief architects of one of the truly outstanding clinical experiments in all of American medical history. This was the experiment conducted by some of Boston's most distinguished physicians under the auspices of the city's Board of Health to demonstrate conclusively the safety and effectiveness of vaccination.[20] On August 16 of that year nineteen volunteer boys, including two sons of members of the Board of Health, were vaccinated before the Board at their office. A week later the participating physicians examined them and declared them to be "fit subjects" for the ensuing experiment. A temporary hospital was built on Noddle's Island and, after some difficulty, fresh smallpox matter was obtained. Then, on November 9, twelve of these boys, plus the son of Dr. Josiah Bartlett, who had been *vaccinated* by his father

two years earlier, were *inoculated* along with two *unvaccinated* youths. All were lodged in one room, given no medicines and allowed to follow insofar as possible their normal life-style. The two unvaccinated boys contracted smallpox and suffered heavily. The vaccinated boys did not. Then the thirteen vaccinated boys were inoculated again, along with the seven vaccinated volunteers who had not been inoculated previously. They were inoculated with matter from the two unvaccinated smallpox sufferers. Still none came down with the hated malady. Finally, in mid-December, a description of this experiment, along with a strong endorsement of vaccination by the participating doctors, was published in the newspapers and in a broadside put out by the Board of Health.

While Rush lacked Waterhouse's passion and talent for science, he certainly was a strong force in, and a champion of, American science of his time, particularly in its nationalizing and popularizing aspects. He was a charter member of the reorganized American Philosophical Society, one of its first curators, and later secretary. Although an enthusiast for all utilitarian science, chemistry, which, along with botany, was the most popular science in post-Revolutionary America, was the field in which he exerted his greatest influence.[21] As Wyndham Miles noted:

> with the creation of a chair of chemistry in the Medical School of the College of Philadelphia and the election of Rush to the professorship, chemistry may be said to have gotten its formal start in America.[22]

Rush was professor of chemistry from 1769 to 1789, and he continued to maintain a strong influence over the chair long after that. Four of his students, all distinguished physicians, succeeded him in this post. This gave the professorship a continued medical emphasis until 1818, although there was pressure to give it a more purely scientific orientation. Rush also worked hard to popularize chemistry. Between 1770 and 1783 he published at least three outlines of his lectures. On the eve of the Revolution he gave two sets of public lectures designed to demonstrate the application of chemistry to agriculture and manufacturing. In 1781, while temporarily unaffiliated with a medical school, he gave a private set of lectures on chemistry as well as one on the theory and practice of medicine. In 1789 he delivered a course of twelve lectures on the principles of chemistry and their application to cooking and housekeeping to the students of the newly opened

Young Ladies Academy of Philadelphia, which he had helped to organize. Lastly, one of his students founded the first known chemical society in America.

Military Medicine

In contemporary terms, perhaps the single most important feature of American medicine of 1760 to 1820 was the massive participation of physicians in the military medical aspects of the Revolutionary War. Approximately four out of every ten American doctors then practicing saw some sort of military medical service in the Continental army, the regular and irregular state militias, the Continental and state navies, the privateers, or with the British forces.[23] What makes this figure even more impressive is that a large number of doctors also served as line officers or in a political capacity. As mentioned before, Waterhouse, to his detriment, missed all of this. Rush, however, played a spectacular but highly uneven role.[24] Early in the war, he was an energetic and useful member of the medical committee of the Continental Congress. At this time he rendered an especially important service in strongly supporting Washington's plan to undertake a mass inoculation of the Continental soldiery. The successful execution of this plan marked the greatest achievement of Continental army medicine. Following this, Rush was a loose cannon as Surgeon General of the hospital in the Middle Department, ranting and venting his frustration on William Shippen, Jr., and Washington at a time when stoic determination would have been of much greater use. His impulsive resignation from that office and his continuing vendetta against Surgeon General Shippen further undermined an already badly weakened Continental army medical service. However, Rush also authored the useful and highly influential *Directions for Preserving the Health of Soldiers: Recommended for the Consideration of the Officers of the United States.* This was the most important piece of military medical literature to come out of the Revolution and one that influenced the United States Army medical corps down almost to the Civil War.

From the present perspective, however, the most important aspect of medicine of the era 1760–1820 was the founding of our earliest medical institutions, most of which were to become the flagships of American medicine. Here, both Rush and Waterhouse were deeply involved, but again in quite different circumstances and with quite different results.[25] As Whitfield Bell pointed out, in Philadelphia first

came the general hospital (1752), then the medical school (1765), and last the medical society (1787); in Boston it was just the opposite.[26] Indeed, Boston did not have a general hospital until 1821, seven decades after Philadelphia. Just why this should have been so is by no means entirely clear. However, this is probably the single most important fact of early Boston medicine. Note also that in Philadelphia the general hospital and medical school had been founded before the Revolution and within a cosmopolitan imperial context while in Boston the medical society and medical school were founded at the end of a prolonged struggle for independence. The Medical School of the College of Philadelphia did not escape the white heat of war and revolution, however.[27] In 1779 revolutionary politics caused it to be absorbed into the newly created University of the State of Pennsylvania. In 1789 a Thermidorean reaction caused it to be returned to the newly restored College of Philadelphia. Finally, in 1791 it was combined with the still extant medical school of the University of the State of Pennsylvania to become the present University of Pennsylvania Medical School. This was the medical school that Rush raised to both predominance and preeminence in the new nation. By 1810 it had two-thirds of the 650 medical students enrolled in America's six active medical schools.[28] It was, as James Jackson and John Collins Warren of the Harvard Medical Institution ruefully acknowledged, "the only school of eminence in the country."[29] By contrast, between 1788 and 1810 the Harvard Medical Institution had graduated only fifty-one students in course, and Waterhouse's tenure as professor of the theory and practice of physick had been marked by chronic difficulties and uninspired teaching.[30] In 1812 he was forced out of Harvard because of incompatibility with the rest of the medical faculty, all allies of his bête noire, John Warren, and his role in trying to establish a new medical society that probably would have led to the founding of another medical school. Actually, Waterhouse's position at Harvard had been untenable since 1805, with the appointment of John Warren's son, John Collins, as assistant professor of anatomy and surgery, and William Dandridge Peck, a favorite of the high Federalists, as Massachusetts Professor of Natural History. It is interesting to speculate what might have happened had Waterhouse succeeded in founding another medical society and a new medical school in Boston. Certainly the medical history of Boston would have been more interesting and far more typical of other American cities, including Phila-

delphia. As it was, the presence of only one medical school, one general hospital, and one regular state medical society in Boston until well into the middle of the nineteenth century allowed the city's WASP elite to completely dominate its medicine until well into the twentieth century. Medically, this probably was a good thing. In social and intellectual terms, its benefits are far more questionable.

Perhaps the most important contribution Waterhouse made to Boston's medical institutions came from his association with the Marine Hospital in Charlestown.[31] As early as 1803, when a new hospital was being built, Waterhouse lobbied to have it used for badly needed medical teaching purposes. From 1807 until 1809, while Physician in Charge at this institution, he strengthened its connection with Harvard, improved its internal organization, publishing its first *Rules and Orders,* made the building and grounds more attractive and opened up an outpatient department. His dismissal in 1809 on charges of nepotism and petty graft appear to have been caused by a mixture of personal arrogance, political naiveté and the machinations of doctors William Eustis and John Collins Warren, both of whom were adept and adroit infighters. In 1969 Waterhouse received something of a posthumous vindication when a ward of the Boston Public Health Hospital was named in his honor.[32]

Rush, the Physician

Although Rush was one of the founders of the College of Physicians of Philadelphia, his association with this body was brief and stormy. He did, however, deliver an important inaugural discourse before the College on February 6, 1787, in which he delineated with considerable astuteness the role of the medical society in terms of developing collegiality, exchanging medical information and opinion, being a catalyst for the advancement of medical science and serving as an effective lobbying agency.[33] A more important institutional affiliation was that of consulting physician to the Pennsylvania Hospital from 1783 until his death. It was here that he came into close and constant contact with the patients of that institution's facilities for the insane, which resulted in his undertaking reforms and writings that entitle Rush to be called "the father of American psychiatry."[34] Shryock gives an excellent summary of his reforming activities among the insane at the Pennsylvania Hospital:

> He not only employed kindness, suggestion, and occupational therapy; but encouraged patients to go back over their own mental history in a manner which has been viewed as suggestive of psychoanalysis. He also employed shock—in the form of an unexpected deluge of cold water—and may have viewed this as a psychological rather than a somatic remedy. Despite the severity of some of his restraining devices he was a pioneer in this country in advocating relatively humane institutional care.[35]

Another important aspect of Rush's work in psychology and psychiatry was his continuous attempt to tie them both to general medicine and sociology.

Of even greater importance were his two major publications in this area. The first and most important, but less well known, in his *An Enquiry into the Influence of Physical Causes Upon the Moral Faculty,* read before the American Philosophical Society on February 27, 1786. Here Rush argued that the moral faculty (the capacity in the mind of choosing good and evil) is directly influenced by physical and environmental factors, is subject to illness, and may be restored to health just as the rest of the body can. He also tried to categorize mental disorders according to behavior, a highly innovative undertaking for an American physician of this era. A far better known and more celebrated work is Rush's *Medical Inquiries and Observations Upon the Diseases of the Mind,* published in 1812, the year before his death. This book, which went through five editions by 1835, was one of the first systematic works on psychiatry and greatly influenced the early mental health movement in America. It remained the only American textbook on psychiatry until 1883.

A brief observation on Benjamin Waterhouse and early American psychiatry. In his inaugural address at the opening of the Harvard Medical Institution, he entreated:

> most earnestly to the powers and virtues of the Commonwealth, to supply a *desideratum,* benevolently called for by suffering humanity,—I mean, the study and restoration of the mind diseased.[36]

In 1809 he visited Philadelphia, in part to investigate facilities for the insane there. Subsequently, he argued that if Massachusetts should build an asylum it should not be in Boston, or near a general hospital "so as to associate one with the other," and should not be subservient to the medical school.[37] Perhaps if Waterhouse had been in Philadelphia he, too, might have been an important pioneer in American psychiatry.

Conclusion

By 1813 Benjamin Rush was dead. Benjamin Waterhouse would live on to 1846, but after 1820 he was viewed as a proud relic of the past. This despite his enthusiasm for Thomsonianism, Jacksonian democracy, and westward expansion. However, the era in which these men left their imprint was an impressive one for American physicians. Large numbers of them enthusiastically and effectively participated in a political revolution whose institutions and ideals have influenced for the better the course of history. At the same time many of these doctors laid the institutional foundations of American medicine, which also has influenced for the better the course of history.

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Sexuality in Perspective

WILLIAM H. MASTERS

It would seem appropriate to begin this discussion on a familiar theme. The basic statement of the Masters & Johnson Institute's therapeutic philosophy is that sex is a natural function. There isn't anyone who is not aware that sex is a natural function. And yet there are very few who have ever had the privilege of living in our culture with sex as a natural function. It will only be our children, or probably our grandchildren, who will have that privilege.

What is implied by the statement that sex is a natural function? It is the Institute's position that sexual functioning should be considered by the health care professions in exactly the same category as bowel, bladder, or respiratory functions. As you are well aware, this is not the current state of affairs. We are making progress; attitudes are changing, but not rapidly enough to affect the current generation.

Sex as a Natural Function

What evidence do we have to support the contention that sex is a natural function? The evidence comes from different sources, but my personal orientation to the concept developed during the first delivery at which I assisted as a brand-new intern. The baby — a boy — was born with a complete erection. I had no idea that such a reaction was possible at birth. After the baby was delivered and the cord was cut, I questioned the attending physician. Had he noticed that the baby had an erection? Did most baby boys have erections before they took their first gasp? Why did the newborn baby boy have an erection? The reply was that the erection was caused by pressure on the baby's head as it came through the birth canal. For three weeks I believed this explanation. Then I scrubbed for my first Cesarean section, an elective operation. The woman hadn't been in labor. That baby, again a boy, also had a full erection before he took his first gasp. I realized that the gullible new intern had been had, but he still had no explanation for the immediacy of erectility.

We now know that many baby girls, presuming they aren't severely depressed by the birth process, involuntarily produce vaginal lubri-

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cation in the first twelve to twenty-four hours of life—frequently only eight to twelve hours after birth.

Vaginal lubrication and penile erection are parallel physiological phenomena. They are initiated by the same blood supply, the same types of tissue and probably the same nerve supply. Erections may be conceptualized as obvious physiological evidence of a psychosocial demand to penetrate and lubrication as obvious physiological evidence of an invitation to penetration.

Are male and female infants, who erect and lubricate during the first few hours of life, being sexy in the adult connotation of the term? Obviously not. But it must be admitted that they are exhibiting a certain amount of "reading readiness." No one would even dream of suggesting that these babies had been taught how to erect or lubricate, or that these physiological responses were behaviorally oriented in any way. Yet we have never truly realized the significance of these genetically determined physiological responses.

Normally we are genetically determined to be two things sexually. We are all male or female in gender, and we all have the capacity to function as sexual beings.

Many times health care professionals working in the field of sex therapy are importuned by an impotent man with the oft repeated request, "Teach me to have an erection." Such a request is impossible to grant. It is in exactly the same category as saying, "Teach me to breathe." And how does one do that? A natural function cannot be taught.

If sex is to be accepted as a natural function, proof of this must go beyond the readiness stage of the newly born. There must be evidence that sex behaves like other natural functions in adulthood. And there is such evidence. All natural functions have in common the faculty for voluntary control. We can voluntarily control our natural functions, but for different lengths of time. For example, we have some facility for holding our breath. If we consider respiratory function with its brief period of voluntary control as placed on one end of a continuum, sexual functioning with its unparalleled capacity for voluntary control lies at the opposite end of the continuum.

There are many men and women who have taken the public position of denying any manner of overt sexual functioning for a lifetime as a means of expressing their religious convictions. If just one generally healthy person has been able to refrain from any form of sexual activity

for a lifetime, questions could be raised as to whether sexual functioning is really a natural function.

However, we have only been considering the time when we have voluntary control over our natural functions. But we spend a great deal of our life without voluntary control of our natural functions — when we are asleep. Every natural function sets its own pace and responds in its own rhythm when we are asleep. For example, the respiratory excursions of one's mate are frequently very different when he or she is asleep than when he or she is awake; and the gastrointestinal and genitourinary systems continue to function during sleep, but experts in these fields tell us that they work at a different pace.

If sexual function is indeed a natural function, it must work at its own rate and set its own pace when we are asleep. And it does. Most of you know that every potent man, regardless of age, presuming only a reasonable state of general health, had obvious penile engorgement every eighty to ninety minutes last night in or out of dream sequence. What you may not know is that, regardless of age, every woman, presuming a reasonably good state of health, involuntarily produced measurable vaginal lubrication every eighty to ninety minutes last night in or out of dream sequence. If health care professionals could recognize the concept of sex as a natural function, what an entirely different approach to the subject we would have in our culture.

Cultural Restraints

Our culture imposes far more restraints on sexual response than on any other natural function. Some of the restraints are based on public health concerns. The great majority have originated from myths, misconceptions or religious dogma.

As physicians, we are fully aware that frequently there are many unfortunate psychosocial residuals from the sexual "thou shalt nots" that are imposed on young women in our culture. But we give little thought to the fact that young men are faced with even greater sexual handicaps from cultural imposition of the "thou shoulds." There are at least three male "thou shoulds" that are readily identifiable.

First, for many years it has generally been conceded that the male is the sex expert in any man-woman relationship, a role that he has modestly accepted. Actually, no man will ever be an expert on the subjective aspects of female sexuality. The male sex expert is the man who is fully aware of his limitations.

Second, the male is supposed to be sexually responsible for his female partner. If she isn't orgasmic, it is usually presumed that the responsibility lies with the male partner. Actually, nothing is further from the truth. The male can no more make the female orgasmic than the female can ejaculate for the male. We can aid and abet sexually , but we can't do it for our partners. Such a cultural position of primary male sexual responsibility is a complete denial of the concept of sex as a natural function.

Third, the male is supposed to have the greater sexual need or capacity. Again, nothing could be further from the truth. Actually, the human female is naturally multiorgasmic. The human male is not. As a partial answer to the immediate question of why the difference in sexual capacity between the sexes, one may note that the human female is uniquely endowed with an organ, the clitoris, that, as far as is known, has the *sole* function of sex tension increment. The male has no such organ.

Embryologically, the penis and the clitoris have identical origins, but there the similarity ends. From a psychophysiological point of view, there simply is no comparison between the two organs. One can immediately think of other functions for the penis. There is only one known function for the clitoris.

It is plainly obvious that the male still has a dominant sexual role in our culture (as in most cultures), but it may be short-lived. Man has based his sexual dominance of women on the concept of his greater facility to function, greater sexual need and presumed sexual expertise. Since these are false presumptions, sexual dominance has carried with it a tremendous psychosocial burden.

For generations the pressures of sexual performance have been laid at the door of the sexually dominant male. Those of us who are over fifty know that when we married we had beautifully defined cultural roles. We were living in a double standard society. Husbands were well prepared to do something *to* their wives on their wedding nights. Furthermore, the wives, victims of the same culture, were prepared to be done to.

It wasn't until the early fifties that cultural concepts of sexual roles changed, but unfortunately they were altered 180 degrees in the wrong direction. It became the male's role to do something *for* his female partner instead of to her. Of course, this concept is a complete denial of sex as a natural function. "We can't breathe for her, we can't

eliminate for her, but we can make her be orgasmic." When the wife wasn't orgasmic, the husband assumed the burden of failed sexual performance and, bowing to cultural pressures, began questioning his sexual prowess. "What's wrong with me?" became an oft repeated litany.

We were in the middle sixties before the "doing for" concept began to change. Women's glossy magazines stimulated the change in concept. They began repeating a new and foreign statement to women: "You not only have a birthright but also a responsibility. Yours is the inherent privilege of effective sexual function." Women began to realize that they were as sexually handicapped by the "doing for" concept as were the men. Women who expected men to do for them sexually were denying responsibility for their own sexuality.

In the past ten years men and women have moved rapidly to the concept of interacting *with* each other as full sexual partners. The doing to or for stages are being left behind. By the turn of the century both men and women in our culture are going to be equally privileged to honor their sexuality.

From a female point of view, what a magnificent change — from a sexual service organization to a full sexual partner. What a magnificent change for the male as well. No longer is it his responsibility that she be orgasmic. It is the woman's. Clearly, a certain amount of mutual cooperation is in order. It is now an accepted tenet of our culture that, since sex is a natural function, he can't do it for her and she must stop expecting him to do so.

Sex as an Appetite

We have to learn a new set of rules if we are going to lead into (as we must) and acknowledge (as I hope we will) female sexual equality.

The greater physiological sexual capacity of the female can lead to a major degree of marital distress if men and women are not properly educated. Orgasm is a very selfish experience (using the term in the connotation of being self-centered). When a man is ejaculating, he is primarily concerned with I-me at that moment. When a woman is orgasmic, she is also primarily concerned with I-me at that moment. Much has been made of the cultural myth of mutual orgasm. People work to achieve this presumed great goal — something that is really appreciated only in retrospect. Such a reflection rarely brings as much subjective sexual pleasure as the individual's opportunity to appreciate

objectively his partner's peak of sexual response.

When considering male or female sexual needs, we are really discussing a natural appetite. Therefore, the analogy to the appetite for food or of sitting down to the dinner table would seem comparable to the appetite for sex or of moving to the bed. Such an analogy can be used in many different ways. For instance, we can deal with problems that might arise from different levels of sexual appetite between marital partners in the same way we would deal with variations in the partners' appetite for food.

Let's suppose that it's been a miserable day at the office. A husband comes home late. His wife has prepared a really delightful meal; it's been fun to anticipate pleasing him. He gets home about 8:30 or 9:00 at night. The mere thought of food is too much. And so he says, "Look, I've had a terrible day; I'm not even sure I will have a job tomorrow. I'm just not hungry."

Does the wife have a moment's passing concern for the time wasted? Certainly, but does either one of them ever think that tomorrow night he probably won't be hungry? No such thought enters their minds.

Same man — miserable day at the office — he gets home about 8:30 or 9:00 at night. His wife has been anticipating his return all day; she's in need sexually, so she gives proper signs and signals of her high level of sexual appetite. Nothing could have been further from his mind. Yet rather than say, "I'm not hungry sexually" and treat his sexual need (or lack of it) as a natural appetite, he tries to force the issue. Since not only is there no real sexual appetite at the moment, but he is also obviously distracted by extraneous stresses, there may be no erection. Subsequent to this naturally traumatic situation would this man and woman say to themselves, "I wonder what it will be like tomorrow night since he couldn't respond tonight"? You can be certain that they would.

The lack of sexual appetite is not treated with the same objectivity as the lack of appetite for food. As opposed to their ability to discuss the husband's lack of appetite for food, there is no comparable freedom of communication between these two people when his sexual appetite (or lack thereof) is involved. The husband doesn't have the courage to say, "Look, it's been a terrible day. I just don't have any sexual appetite." Even if he does, his wife may not accept his statement at face value. She might raise such questions as, "What's wrong with him?" or "What's wrong with me?" or "Where has he been?" These thoughts

usually go unspoken, and a significant level of mutual trauma develops within the relationship.

What neither men nor women realize is that any man who experiences a single occasion of functional sexual failure (an occasion that he really takes seriously) is at least halfway along the way to impotence.

Sexual Dysfunction

When dealing with the problems of sexual dysfunctions, one comes to appreciate the many dimensions of effective sexual functioning. From a psychosocial point of view, we believe that effective sexual function is one of the better — if not the best — means of nonverbal communication in committed relationships between men and women. The Institute defines effective verbal and nonverbal communication in a committed relationship as the privilege of exchanging vulnerability. The key words in this definition are "committed relationship." Obviously, there is little vulnerability exchanged in any mating accomplished by partners who feel little or no sense of mutual commitment.

Spectator roles and anxieties about sexual performance affect both sexually dysfunctional men and women. These handicaps must be neutralized if the sexual disorder is to be reversed. We will use the example of a sexually inadequate man to discuss these handicaps.

The spectator role can best be described by presuming that there is always the "third person in the bedroom." When a man with erective insecurity and a woman are actively engaged sexually, the man and woman are in the bed together and, figuratively, the man is also in a corner of the room watching himself as a spectator to see whether (1) he is going to achieve an erection, (2) he is going to maintain the erection long enough for mounting, (3) he will be able to maintain the erection long enough for his partner to achieve sexual satisfaction. The more the man watches himself, the more he questions himself, the less likely he is to have positive answers to his questions.

If the man's sexual difficulties continue unabated, it isn't very long until there are four people in the bedroom. The man and woman in the bed together, the man in one corner of the room watching himself, and the woman in another corner also watching to see if he is going to have an erection and whether it can be maintained. The spectator roles inevitably distract both men and women from higher levels of sexual involvement.

One of the most important elements for satisfactory male sexual

functioning is an effectively functioning female. The more honestly and openly the woman responds sexually, the more effective partner she becomes. Why? Although there are innumerable sources of sexual stimulation, there are only three major ones. This is equally true for both men and women. Since we have been using the male as an example, we will continue along the same track.

In overt sexual interchange, if the male moves to the female partner and enjoys her body for his pleasure, it's stimulating for him. When she moves to use his body for her pleasure, that's also stimulating for him. If in the process of mutual play, she obviously becomes highly involved sexually, she provides a stimulative bonus that he desperately needs, particularly in a long, continuing relationship.

If the female handles her greater sexual capacity by lack of acknowledgment, by hiding the depth and degree of her sexual interest, even by overt repression, she's creating problems for the sexually dysfunctional male as well as for herself because she's removing, or at least neutralizing, a major source of sexual stimulation for her male partner.

For centuries, anxiety or even fear of sexual performance has been primarily a male sexual handicap. Only in the last two decades have sexually dysfunctional women been contending with high levels of performance anxiety.

The sexually anxious male inevitably tries to force an erection. No man can will an erection; he must be taught to let an erection happen, not try to make it happen.

The sexually anxious man is constantly concerned with how his image fares in the opinion of his female partner. He is fearful that he will not be able to erect, to insert, or to maintain an erection on demand — the demand of intercourse. One of the most effective approaches in relieving male performance pressure is to neutralize the cultural concept that the only acceptable form of sexual expression is to put the penis in the vagina.

Is the penis in the vagina always the be-all and end-all of sexual functioning? If we are looking to improve the male's sexual effectiveness, the answer should be no. The mere statement that there is only one acceptable pattern of sexual interaction puts incredible functional pressure on the male. When he "sits down to the table" with his wife, he should have the privilege of responding to her statement of need in any way he chooses. This freedom to respond in his chosen fashion relieves most of the pressure of performance from the male. Is taking

this position a denial of the importance of penis in the vagina? Not at all. But there are other ways of effective sexual interaction. As long as men and women realize that there are other acceptable ways to attain their mutually required sexual release, the man is in a relatively non-pressured situation. He doesn't have to talk about "what a tough day it was at the office" or whatever the male equivalent of "I have a headache" is. When men realize that other patterns of sexual interaction are acceptable, they find it far less threatening to move spontaneously to attempts at coital connection.

Homosexuality

Homosexuality is a natural form of sexual expression. Homosexuality is not a disease. It has been considered a sexual perversion by the health care community—but this is a cultural judgment, nothing else. At present, we have no secure evidence that homosexuality has a genetic determinate. Many of the health care problems that arise regardless of the individual's sexual preference should be areas of concern for the health care professions. As physicians, we have not accepted this responsibility.

In no sense are we suggesting a change in any individual physician's approach to—or concerns with—the subject of homosexuality from a sociocultural point of view. However, we are suggesting full acceptance of responsibility for the health care problems of the homosexual population. This approach will not be possible for many people. Our culture has an incredibly powerful influence.

The Laboratory

We have had the privilege of working in the physiology laboratory over the years with both homosexual and heterosexual study subjects. All these people had something in common. They were very effective sexual performers—highly selected individuals. It is inevitably true that, if you wish to find out what happens functionally, you had best work with those it happens to. It is also true that the laboratory environment creates an artificial situation. We have never suggested that what happens in the laboratory is completely reduplicatable at home in bed with the bedclothes up and the lights out. On the other hand, if we are to have even reasonably secure knowledge of human sexual physiology in order to treat problems of sexual dysfunction effectively, we have to have laboratory data.

Sexual Fantasy

What of sexual fantasy? Therapists frequently have suggested that men and women discontinue their free association fantasies during sexual activity and concentrate on their partner. But this fantasy concentration on one's mate usually doesn't happen with sexually proficient people. The Institute conducted in-depth interrogations in statistically comparable groups of heterosexual men, homosexual men, heterosexual women and homosexual women. In-depth interrogation was defined as at least three interview sessions. The interviews were conducted at separate times by a male researcher, a female researcher and a dual sex team. People generally respond to the first interview on fantasy material with what they want you to know. In the second interview they may alter their response a bit and emphasize what they think you want to know. It isn't until the third time or even a fourth or fifth interview that the interrogators can feel reasonably secure with the information collected.

Fantasy content was then statistically evaluated in terms of frequency of occurrence in the four categories of male/female homosexual and heterosexual.

First, in terms of frequency of occurrence, was forced sex. There was equal distribution of fantasy content between being forced into or forcing sexual episodes. Such a high frequency level for forced sex content was no surprise.

Second in terms of frequency of occurrence was cross-preference fantasy. This finding was indeed a surprise to the research team, so it will be discussed briefly. The content of the third most frequently reported fantasy of functional homosexual men was heterosexual in content. The third most frequently reported fantasy of homosexual women was heterosexual in content. The fourth most frequently reported fantasy of heterosexual men was homosexual in content, and the fifth most frequently reported fantasy of heterosexual women was homosexual in interaction.

Forced sex and cross-preference fantasies were the only types of fantasy content that were present in the top five in terms of frequency of occurrence for all four research groups.

Many heterosexual men and women have been treated for years as latent homosexuals because they have reported homosexual fantasies, but we have never heard of homosexual men or women being treated as latent heterosexuals because they had heterosexual fantasies. An-

other interesting factor in sexual fantasy content is that men and women who are heterosexual and men who are homosexual rarely fantasize their established sexual partners. Only lesbian women fantasize their sexual partners with any significant frequency.

Ambisexual

During the Institute's homosexual research period, an interesting minor subgroup of individuals was identified. The term "ambisexual" has been used to describe a small, selective sexual preference group. Over a thirteen-year period six ambisexuals of each sex were identified. This is a very small "n." By Institute definition, ambisexuals are men and women who function well sexually with both male and female partners. They could certainly be termed bisexuals, but from a psychosocial point of view they go well beyond this preference label in unique behavior. *They literally have no sense of personal commitment.* A carefully taken history reveals that there is absolutely no emotional identification with mothers, fathers or siblings. Nor have they had any significant personal identification with any other man or woman in their lives. In addition to the fact that they function with a high degree of effectiveness sexually in both homosexual and heterosexual roles, they have never experienced an entangling personal relationship. The ambisexual's sexual behavior also follows a unique pattern.

When an ambisexual man interacts sexually with a fully heterosexual woman for the first time, he assumes sexual dominance immediately. He moves to the woman and initiates sexual stimulation. At his decision he activates mounting, determining positioning, inserting his penis, and sets the thrusting pattern.

When an ambisexual man interacts with a fully homosexual man for the first time, there is quiet discussion of procedure and, thereafter, the sexual encounter is usually conducted by full sexual partners.

When the ambisexual woman initially interacts with a fully heterosexual man, she immediately assumes a passive sexual role. During her first sexual encounter with a lesbian, the ambisexual woman may assume a dominant or a passive role but rarely interacts initially as a full sexual partner.

Medicine and Sexuality

Medicine has placed itself in a very difficult position in relation to

its approach to human sexuality. As physicians, the current acceptable medical practice is to face the clinical realities of endocrine and of pharmacologic causes for sexual dysfunction. Surgical intervention with artificial implants for organically impotent men is becoming increasingly popular. However, in most hospitals it is not acceptable practice to inquire as to the status of the patient's sexual functioning during routine history taking on hospital admission. When the system review is conducted while taking the patient's medical history, information is sought relative to the function of the respiratory, gastrointestinal, and genitourinary systems. In most hospitals information relative to sexual functioning is not acquired routinely or, if it is, the patients' responses to questioning are not recorded in the hospital charts. In other words, it is currently considered acceptable medical practice to treat problems of sexual dysfunction, but it is not acceptable medical practice to ask the patient whether such dysfunctions exist.

To demonstrate this particular concern and the potential hazard that it creates, we went to five different medical centers in this country. After proper procedures to obtain permission, we were allowed to examine the records of men who had been admitted in the previous three years for intractable gastrointestinal bleeding and had come to surgery during this particular admission. In most cases there had been prior medical admissions for gastrointestinal bleeding that was controlled by conservative treatment. All cases with the diagnosis of cancer were eliminated from consideration.

Then, with proper permission, we were able to talk to 100 men who came to surgery for intractable, nonmalignant, gastrointestinal bleeding. In all the hospital charts of these men there was only one reference to sexual functioning. A note in one chart written by a third-year medical student stated, "This man says he is impotent." The report was underlined in the history, but apparently nobody paid any attention to it.

Nineteen of the one hundred men who were interviewed by the research team described major degrees of sexual dysfunction or disorder that had developed within two and a half years before they finally came to surgery and within a period of six to nine months before the patient first noticed gastrointestinal bleeding. Each of the hundred men reported that in all their prior medical admissions as well as the final surgical admission, no one had ever asked them about the status of their sexual functioning. The man whose medical chart

contained the note about impotence said that he had volunteered the information because he was concerned that his sexual anxieties might have affected his gastric ulcer.

Do we suggest that all nineteen surgeries could have been avoided if the proper interrogation had been conducted? Of course not. But it is possible that at least a few of these individuals could have been protected from a major surgical procedure. Physicians must realize that a sexually dysfunctional man usually has to contend with as much pressure from a psychosocial point of view as a man who is fearful of losing his job or is experiencing major stresses in other phases of his life. This example of one hundred men treated in some of the finest hospitals in the country for gastrointestinal ulcers, without a single query about their sexual status, is another indication that physicians rarely think of sexual function in the same category as respiratory, bowel or bladder function. We have a long way to go before we, as physicians, not only accept but practice the concept that sex is a natural function.

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REVIEW

CASTAÑEDA-ZUÑIGA, W. R., ed. *Radiologic Diagnosis of Renal Transplant Complications.* 306 pp., illus. Minneapolis: University of Minnesota Press. Price $49.50.

Reviewed by HOWARD M. POLLACK

Although much has been written about the role of radiology in the diagnosis of renal transplant complications, all previous publications have appeared as isolated articles. This is the first attempt to assemble the existing body of knowledge in this ever burgeoning area into a textbook format. The result is a modest (300 pages), yet comprehensive, compendium that covers the field in a highly satisfactory fashion.

It is appropriate that the first textbook to be devoted to renal transplant imaging comes from the University of Minnesota, one of the leading renal transplant centers in the United States. The editor and twelve of the fifteen contributors are all from the state of Minnesota, with the vast majority being involved in the transplant program at Minneapolis, where almost 2,000 renal transplants have been done. The division of the book into three parts — Diagnosis of Systemic Complications, Diagnosis of Local Complications and Therapeutic Techniques—seems quite logical. There are a total of eleven chapters, each written by an acknowledged expert in his/her own subspecialty of diagnostic or interventional radiology. Thus, there are separate chapters devoted to pulmonary, musculoskeletal, gastrointestinal and other nonrenal complications, as well as a thorough discussion of the renal and urologic problems encountered in graft recipients.

Like any textbook, this work has both its strong and weak points. The strength of the text lies in its thoroughness and the obvious expertise of its many contributors. The chapter organization and writing styles are fairly uniform in spite of the multiple authors, and the many illustrations of radiographs are, in general, surprisingly good, especially when one stops to realize that the publisher, University of Minnesota Press, is not primarily a producer of medical textbooks.

The book's deficiencies, while they should not be overlooked, are minimal when compared to its virtues and do not tarnish its value as an educational instrument. Some of the illustrations, especially of chest radiographs, are too small, making it difficult to appreciate the

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described pathological changes. The number of pages devoted to the various body systems affected by complications is quite uneven. For example, while pulmonary complications are covered in twenty-seven pages, and gastrointestinal complications in only seventeen pages, approximately sixty pages (and thirty-five illustrations) are allocated to complications of the musculoskeletal system. This disproportion is difficult to understand. While there appear to be no major omissions from this text, a few subjects, such as fatty infiltration of the liver in patients on steroid therapy, are not mentioned. MRI, which is now coming into its own as a valuable tool in evaluating renal transplants, is mentioned only in passing, and scant coverage is given to CT scanning. In the Interventional Section, there is no mention of percutaneous methods of draining abscesses, hematomas, urinomas, and so forth.

This book is a valuable addition to the literature of renal transplantation and will serve as both a readable textbook and a reference work. It should be in the possession of all radiologists who deal with renal transplant complications and should be readily available to all other members of the renal transplant team. In the Introduction, the editor expresses his hope that this volume will encourage interdisciplinary cooperation among the various specialties involved in renal transplantation. This work could very well have such a unifying effect.

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REVIEW

GORDON, SOL. *Facts About Sex for Today's Youth.* 44 pp., illus. Fayetteville, N.Y.: Ed-U Press, Inc., 1986. Price $6.95.
GORDON, SOL and JUDITH. *A Better Safe Than Sorry Book: A Family Guide for Sexual Assault Prevention.* Pages unnumbered, illus. Fayetteville, N.Y.: Ed-U Press, Inc., 1986. Price $6.95.

Reviewed by KATHARINE E. GODDARD

These are two small paperback booklets that can be most useful in meeting today's needs for forthright information in the sex education of youth. Sol Gordon, currently professor emeritus of Child and Family Studies at Syracuse University, has drawn on his extensive experience as chief psychologist at the Philadelphia Child Guidance Clinic and as associate professor of psychology at Yeshiva University in New York City.

Facts About Sex for Today's Youth is intended for use by adolescents, high school students and their parents. It presents the facts of sexual anatomy, intercourse and reproduction and deals sympathetically with the problems of the young in dealing with their own sexuality and that of their peers. Its language is precise, pithy, streetwise. It assumes the normalcy of sexuality counterbalanced by controlled and balanced behavior. The book is well illustrated with pen and ink drawings by the medical artist Vivian Cohen, and contains a list of supplementary publications.

A Better Safe Than Sorry Book, written by Dr. Gordon and his wife, is intended for children between the ages of three and nine and their parents. Drawing on Judith Gordon's background as a social worker and a nursery school teacher, the book has as its purpose, in direct terms, to impress on children the difference between true affection and seductive advances, the avoidance of "traps" by strangers and of inducements from which there may be no escape.

Both books are clearly illustrated and couched in language of multiracial groups of varied ethnic strains. They should be useful in many settings as we try to meet the pressures and dilemmas today's youth face in the field of sexual behavior.

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James A. Collins, Jr.
1916–1986

WALLACE G. McCUNE

James A. Collins, Jr., died on September 9, 1986, after a three-week illness at his beloved Geisinger Medical Center, where he spent his entire medical career except for a six-month Fellowship at the Mayo Clinic. He had been graduated from Hazleton High School, Pennsylvania State University and Jefferson Medical College before beginning his career in Danville, Pennsylvania.

Jim was a superior physician and gastroenterologist. He was Head of the Section of Gastroenterology at Geisinger Memorial Hospital from 1953 to 1973, Director of the Department of Internal Medicine from 1958 to 1974, and Chairman of the Division of Medical Departments from 1974 to 1978. In 1981 he was appointed Senior Vice President for Research and a member of the Board of Directors at Geisinger. In 1975 he was appointed Clinical Professor of Medicine at Pennsylvania State University College of Medicine at Hershey. From 1958 to 1978 he was Director of a most successful Internal Medicine Residency Program at Geisinger Memorial Hospital, where he continued to act as a Senior Consultant and to see patients until the time of his death.

Jim was a Past President of the Montour County Medical Society and served as its Secretary/Treasurer from 1953 to 1971. He served as President of the Danville Board of Health for thirty-five years and was a member of the Executive Board of the Susquehanna Valley Tuberculosis Society for twenty years. He was a Borough Councilman in Riverside, the community in which he lived.

Jim was President of the Pennsylvania Society of Internal Medicine in 1969–1970 and the American Society of Internal Medicine in 1979–1980. For a number of years he was a member of the Council of the Federated Council of Internal Medicine. Perhaps no one has been a stronger force in the structure, function and organization of Internal Medicine and its public and professional recognition.

He was a member of the Interspecialty Advisory Board of the American Medical Association and Chairman of its Joint Review Committee on Educational Programs for Physicians' Assistants as well as a member

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of the Council of the Section of Internal Medicine. Active also in the Pennsylvania Medical Society, he served as Chairman of the Medical Commission on Graduate Education, Vice Chairman of the Council on Scientific Advancement, Chairman of the Committee on Convention Program, Chairman of the Advisory Committee on Manpower and Allied Professions, Chairman of the Council on Education and Science, and Member and Chairman of the Committee on Aid to Education. He became a member of the Blue Shield Corporation in 1974 and at the time of his death was the First Vice President of its Board of Directors.

The list of Jim's professional accomplishments is much longer than has been cited. Only his friends, colleagues and family could appreciate his personal characteristics. He was talented, resourceful, well organized and had an amazing capacity for hard work. He did not talk much at meetings and, indeed, his friends at the American Society of Internal Medicine referred to him as "the quiet man." When he did speak, he was worth listening to because his remarks were thoughtful and informed. He brought a quiet, serious, intellectual approach to problems and earned the respect of his peers. Writing in the *Internist* in October 1986, Wm. C. Felch states: "His deliberate, careful manner of debating complex issues was his most noticeable feature, but it was leavened by a pungent and clever Irish wit." James Collins, the quiet man, will be missed. We should have more quiet men.

He is survived by Virginia, his wife, and a son, George.

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William Jacobson Rashkind
1922–1986

SIDNEY FRIEDMAN

William J. Rashkind died on July 6, 1986, less than six months after the discovery that he had metastatic melanoma. A Fellow of the College since 1968, he was recognized the world over as an outstanding, innovative pediatric cardiologist. He was the acknowledged "father" of interventional cardiology, a discipline that is now being vigorously pursued to provide the nonsurgical treatment of many varieties of heart disease in both children and adults. He spent the major portion of his medical career in the Division of Cardiology at The Children's Hospital of Philadelphia, the last two years as divisional chief.

Bill Rashkind was born on February 12, 1922, in Paterson, New Jersey. In 1943 he was graduated from the undergraduate school of the University of Louisville and in 1946 from the medical school of the same university. After a rotating internship at the Michael Reese Hospital in Chicago, he began his career in physiology and hemodynamics at the Naval Medical Research Institute in Bethesda, Maryland, From there he joined the Department of Physiology at the University of Pennsylvania School of Medicine, where he remained for four years. In 1953 he decided to begin formal training in pediatrics. This was accomplished on the old Ward G service at the Hospital of the University of Pennsylvania under the guidance of Dr. Paul Gyorgy. In 1956 he took a fellowship in pediatric cardiology at The Children's Hospital of Philadelphia, where he stayed on as a staff member for the remainder of his illustrious career.

His entry into pediatric cardiology coincided with breakthroughs in the diagnosis of congenital heart disease, followed by dramatic successes in its surgical treatment. Bill participated in the first cardiac catheterization carried out at The Children's Hospital of Philadelphia in 1955. Eventually, he became the Director of the Cardiovascular Diagnostic Laboratory, which at the time of his death was performing more than 500 catheterizations per year. His reputation and outstanding skill in this technique were recognized throughout the world.

While providing this essential clinical service at the hospital, he had many other medical interests. The ultimate gadgeteer, he was always

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trying to apply his current device to the diagnosis and treatment of congenital heart disease. For a while he worked on a small pump oxygenator to sustain very sick babies with severe oxygen lack. He was determined to find a way to create an atrial septal defect in children with transposition of the great arteries, a group of patients who would benefit from such an additional defect. He tried a number of gadgets, and one day it dawned on him that the use of a balloon to dilate the already existing foramen ovale in patients with transposition of the great arteries could result in the creation of a defect which could preserve the life of these infants. In 1966 he and Dr. William W. Miller published a landmark article in the *Journal of the American Medical Association* entitled "The Creation of an Atrial Septal Defect Without Thoracotomy as a Palliative Approach to Complete Transposition of the Great Arteries," a concept that opened the way to interventional cardiology.

Later Dr. Rashkind pioneered in devising instruments enclosed and introduced within a cardiac catheter to close a patent ductus arteriosus and an atrial septal defect. Progress made in the past three or four years in the treatment of pulmonary stenosis, coarctation of the aorta, aortic stenosis and coronary artery heart disease, using the principle of balloon dilatation, can be attributed to his original idea of balloon atrial septostomy. An untold number of lives have been saved, cardiac operations made unnecessary and human suffering reduced by these techniques. It was entirely fitting that Bill received the 1986 Ray C. Fish Award, posthumously, at the International Symposium on Interventional Cardiology in Houston, Texas, in the fall of 1986.

Space does not permit the listing of all his accomplishments and their recognition. Bill was a Charter Member of the Sub-board of Pediatric Cardiology of the American Board of Pediatrics and later became Chairman of the Examining Board. He was honored with named lectureships by the American Heart Association, the Association of European Cardiologists, and the New York Heart Association. He was President of the Section on Cardiology of the American Academy of Pediatrics and a member of the Society of Pediatric Research and the American Pediatric Society.

What does not appear in his curriculum vitae was the warm, caring and compassionate person who was loved by everyone who worked with him. He was always jolly and optimistic. It was a pleasure to be in his company. He hated to refuse anybody's request for anything. His

memory will be among us and influence us for many years.

Bill is survived by his loving wife, Rita (Leisten) Rashkind, two daughters and a son.

34th Street & Civic Center Boulevard
Philadelphia, PA 19104

DEPARTMENT OF RETROSPECTION

A Discourse Delivered Before the College of Physicians of Philadelphia, Feb. 6, 1787 On the Objects of Their Institution

BENJAMIN RUSH, M.D., &c. &c.

Mr. President and Gentlemen,

I feel peculiar pleasure in reflecting, that the late revolution, which has given such a spring to the mind in objects of philosophical and moral enquiry, has at last extended itself to medicine, and in less than five years after the peace, before the human faculties had contracted to their former dimensions, a college of physicians, formed upon principles accommodated to the present state of society and government in America, has been established in the capital of the United States.

The design of the present essay is to point out, in a few words, the advantages which may be derived from this institution and to suggest the many resources, which our country offers for the improvement of medicine.

I shall consider the objects and advantages of our institution, 1st as a College, and 2ndly, as a Medical Society.

I. By assuming the name of a College, we shall 1st, be able to introduce order and dignity into the practice of physic, by establishing incentives and rewards for character. Men are generally anxious to preserve the good opinion of those with whom they are obliged to associate. The reception we shall meet with from each other in our meetings will serve to correct or to improve our conduct. And if we are as chaste as we should be, in the admission of members, a fellowship in our College will become in time, not only the sign of ability, but an introduction to business and reputation in physic.

2ndly. By assuming the name of a College we may give a sanction to an American Dispensatory — for I take it for granted, this will be one of the first objects of our attention. —

— The variety in the degrees, and perhaps nature of our diseases,

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and the many remedies which are peculiar to our country, which have as yet no place in foreign dispensatories, render this undertaking a matter of absolute necessity.

3rdly. By means of our association, under the title of a College, we shall be better able to attract the attention of the government of our country, in matters that relate to the health and happiness of our fellow citizens. In the year 1725, the College of Physicians of London, presented an address to the British House of Commons, in which they bore such a testimony against the pernicious effects of distilled spirituous liquors, as laid the foundation of several excellent laws, that were calculated to lessen the consumption, and of course, the fatal consequences of those liquors. The disinterestedness of such interpositions of a medical faculty, in favour of the health and morals of their fellow citizens cannot fail of ensuring their success with a legislature.

4thly. By stated meetings as a College, we may promote enquiries and observations upon the prevailing diseases of the city. Here the timid may be encouraged, and the sanguine may be taught to doubt. Here the young practitioner may profit by the experience of the old, and the old by the boldness of enquiry, and modern improvements of the young. Here, uniformity in principle, and practice in medicine, will gradually insinuate themselves. Nor will the advantages of our conferences end in the acquisition of knowledge. The heart will naturally interest itself in the pursuits of the head. Here friendships will be contracted and cemented, and occasional and unavoidable suspicions or disputes may here be accommodated by explanation or mediation. By these means we shall become, not only the guardians of the honor of the profession, but likewise of each other's character.

II. As a Medical Society associated for the purposes of collecting and publishing medical observations and enquiries, an ample field lies open before us.

The human body still contains secrets which have eluded the enquiries of the anatomists and physiologists of the *old* world. Who knows but they may be reserved by Heaven, to give immortality to the name of an American physician.

Our country abounds with objects for the improvement of Chemistry, Botany, and Materia Medica. How few of the fossil and vegetable substances peculiar to America, have been examined by men capable of applying them to the purposes of medicine.

The winds, the local situations of the different parts of America, and the particular diet—dress—customs—manners—occupations—and buildings of our country, furnish immense opportunities for the improvement of pathology.

It remains yet to be discovered and recorded, whether the extent of human life has been encreased or diminished in America.

The effects of agriculture, horticulture, manufactures, commerce and civilization, in their progress from their first to their last stages, upon the health and life of man, can at present be ascertained with precision in America. Here, too, we may discover the symptoms which gradually accompany the change of natural into artificial diseases.

The comparative effects of the different articles of agriculture upon health, such as wheat, Indian corn, rice, tobacco and indigo, remain yet to be explored in this country.

The cutting down of our woods has had a sensible effect upon our climate, and upon the health of our inhabitants. It remains yet to be determined whether the increase of fevers from this cause, is produced by the encrease of exhalation, or by the progress of easterly winds westward, as has been supposed by Mr. Jefferson, in his notes on Virginia.

It yet remains to ascertain the full influence of cultivation upon our bodies. The highest degrees of it known in America, have had a visible effect upon health. In Connecticut, one of the oldest and best cultivated states in the union, remitting and intermitting fevers are seldom known.

It is certain that more rain and less snow have fallen in our winters, within these few years, than formerly. It becomes us to enquire, whether the change in the moisture of our atmosphere, from this cause, has added to the number or altered the symptoms of our diseases.

The comparative influence of the moon on diseases in this country, is a subject worthy of close investigation, though unfortunately hitherto but little attended to.

America furnishes almost the only spot on the surface of the globe, to determine whether different forms of government have any influence upon health and life. In countries where power is confined, by hereditary succession, to a few hands the effects of political passions are much limited. But even in these countries we often read or hear of their baneful operation upon the human body. The abbe Richard tells us, it has more than once happened, that cardinals have died in

24 hours after the election of a pope—and I have heard a well-attested anecdote of a Swedish officer, who was seized with a bilious colic, which terminated in a palsy, from a rebuke which he met with from the present King of Sweden. In a country, where the safety, power, and offices of government are the objects of attention or desire of every man, it is a matter highly interesting to know what are the effects of the passions, which are excited by those objects, upon the human body. Are madness, melancholy, the hysteria and hypochondriasis, more frequent in republics than in monarchies? I think we are possessed of a sufficient number of facts to determine this question.

It remains yet to determine the comparative effects of *labour* and *learning* upon health and life. At present the former, compared with the latter, in the middle and southern states, is in the ratio of four to one. From the number and growth of the colleges and schools lately established in these states, it will be in our power to determine, in a few years, whether we have increased or diminished, with knowledge, the health of our fellow citizens.

The influence of religious opinions upon health and life may be discovered in America; for, by the principles and forms of our constitutions, a boldness and freedom of enquiry upon religious subjects have been introduced among us, which have been hitherto unknown in the world.

The effects of emigration upon life and health, have as yet been the subject of no enquiry. Is the *maladie de pays,* or home-sickness, so distressing and fatal to the Swiss, common to all the emigrants from Europe on their first arrival among us? Are they most subject to our epidemic diseases, the *first* or *second* year after they arrive in our country? Is there any mode of preventing these diseases? And lastly, do these persons exceed in health or life the natives of America? We have many facts which will enable us to determine each of these questions.

The effects of the mixture of the human species of different nations and countries upon health and life, may here be determined by accurate observations. It is certain, that the inferior species of animals are improved in strength by the mixture. But further; the mulatto possesses stronger stamina than belonged to his father or mother. The size, strength, health and longevity of Englishmen have been ascribed to the intimate mixture of the blood of half the nations of Europe, from which they are descended. To the effects of this mixture, like-

wise, may be ascribed that elevation and perfection which the human understanding has acquired in Great Britain. I take pleasure in sacrificing national prejudice to truth and philosophy by introducing this observation, especially as I anticipate the same national character from the operation of similar causes upon the citizens of America.

There are several diseases peculiar to our country which have never been described.

The *vomiting* and *purging,* which are so frequent and fatal in the summer months, in all the cities of America, would furnish an excellent subject for medical enquiry.

The cause of the *decay of the teeth,* which is so frequent in the middle and eastern states of America, will admit of much curious and useful speculation.

The sudden and often fatal effects of a draught of cold water upon the human body in this city, and the remedies proper to remove them, will furnish another subject for a medical communication.

The qualities of our pump water, and the influence of building upon it, are proper subjects for chemical investigation.

The reason why the suburbs and south end of our city are more subject to autumnal fevers than its centre and north end, and why these fevers are less frequent within these three years than formerly, deserve our attention.

The high price of fire-wood, makes it necessary to examine the effects of fossil coal, and stove rooms, upon health and life.

The symptoms and degrees in which our acute and chronic diseases agree and disagree with the descriptions of the same diseases published in Europe, will furnish ample matter for observation.

An enquiry into the causes why the Dysentery is equally the consequence of a dry and wet summer, and why it appears on the summit of high grounds, while the vallies below them are visited with remitting and bilious fevers, may lead us to determine, whether that disorder be idiopathic, or whether it be the *febris introversa* of Dr. Sydenham.

For the sake of obtaining full information and accurate observations of the state of the air and weather (so essential to obtaining a history of diseases), I would recommend to the College, to appoint one of their body for the following purposes.

1st. To record and communicate to the College an exact account of the temperature of the weather as measured by Fahrenheit's Thermometer.

2ndly. To record the variations in the weight and moisture of the air, by the Barometer and Hydrometer.

3dly. To record the state of the winds.

4thly. To measure exactly the quantity of water that falls in our city. These observations will be more useful, if we can obtain from the sextons of the different churches in the city, such a return of the deaths, as will enable us to ascertain the increase or decrease of mortal diseases by the bills of mortality. To render these bills more useful, let the sexton be directed, in every case of death, to apply to the physician who has attended the patient for the name of the mortal distemper.

Let the observations on each of these subjects, be delivered every month to the College.

To obtain an accurate knowledge of the epidemics of the city, I would recommend the preservation of the accounts of the diseases that are kept in the *Dispensary*. If these diseases be recorded by the names that are given to them by Dr. Cullen, in the last edition of his Nosologia Methodica, the account of them cannot fail of being highly useful and beneficial to the public. To derive the utmost possible advantage from this history of our epidemics, let us endeavour to procure similar observations from different parts of the state, and from every state in the union.

To render our city as celebrated for medical advantages, as it has long been for other things, it will be necessary to erect in it *warm* and *cold baths*. The advantages of both these remedies in a country where the diseases from heat and cold are so predominant, need not be mentioned.

A Medical Library, will help to diffuse knowledge among us upon easy terms, while a botanical garden will furnish us with an opportunity of cultivating that part of the Materia Medica, which is derived from the vegetable kingdom.

Should an application be made to the legislature, there can be no doubt of our obtaining a suitable piece of ground for that purpose.

Thus, Mr. President and Gentlemen, have I pointed out in a few words, the great objects and advantages of our College of Physicians.

I shall conclude with the following remarks. It is a general opinion that the condition of man in our world is mending. The conveniences and pleasures of life, are daily multiplying by the inventions of philosophy. Many disorders, once deemed incurable, now yield to medicine. No wonder then that a general expectation prevails—that a revolution

is soon to take place in favour of human happiness. Natural means appear to be the instruments designed by heaven to fulfill its purposes of mercy and benevolence to mankind. I am fully persuaded there does not exist a disease in nature, that has not an antidote to it. And when I consider the influence of liberty and republican forms of government upon science, and the vigour which the American mind has acquired by the events of the late revolution, I am led to hope that a great portion of the honor and happiness of discovering and applying these antidotes may be reserved for the physicians of America.

ACADEMIA

Items of Interest from Philadelphia Medical Centers

Thomas Jefferson University. *Jouni Uitto, M.D., Ph.D.,* has served as Professor of Dermatology and Chairman since November 1, 1986.

Edward A. Jaeger, M.D., professor of ophthalmology, was installed recently as president of the Pennsylvania Academy of Ophthalmology and Otolaryngology.

On March 25 the Bodine Center for Radiation Therapy, in honor of *William W. Bodine, Jr.,* late chairman of Thomas Jefferson University's board of trustees, will be dedicated. Equipment for the Center will include two 25-megavolt linear accelerators and two 6-megavolt linear accelerators.

University of Pennsylvania Health Institutions. *Gerald S. Lazarus, M.D.,* has been given the Marion B. Sulzberger Memorial Award and Lectureship for his contributions in the field of dermatology.

The Medical College of Pennsylvania. The appointment of *Susan V. McLeer, M.D.,* as Chief of the Division of Child Psychiatry has been announced.

The Medical/Dental Staff has elected *Michael J. Barrett, M.D.,* its President for 1986–1987.

Marjorie Dugan, Ph.D., has been appointed executive assistant to *D. Walter Cohen, D.D.S.,* president of the medical college.

The announcement has been made of the appointment of *Bruce L. Hoffman, M.D.,* as chief of the division of rheumatology.

The Office of Naval Research has awarded a grant to *John Clarke, M.D.,* to develop a computer-aided support system to help medical corpsmen at sea manage specific accidental injuries.

Doris G. Bartuska, M.D., has been elected president of the American Medical Women's Association.

The University of Witwatersrand in Johannesburg has conferred an honorary degree on *Joseph Wolpe, M.D.,* honoring him for his leadership in the theory and practice of behavior therapy.

Sariel G. G. Ablaza, M.D., has been appointed chief of the division of cardiothoracic surgery.

D. Walter Cohen, D.D.S., has been awarded an honorary doctorate by the University of Louis Pasteur in Strasbourg, France.

Hahnemann University. *Stanley A. Brockman, M.D.,* formerly at Thomas Jefferson University, has been appointed professor and chairman of the Department of Cardiothoracic Surgery.

The appointment of *Stanley Cohen, M.D.,* as professor and chairman of the Department of Pathology and Laboratory Medicine has been announced.

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William S. Frankl, M.D., has been appointed director of the Likoff Cardiovascular Institute and the division of Cardiology.

Aided by a grant from the van Ameringen Foundation, a Center for Alzheimer and Related Diseases has been established under the direction of *Burton Weiss, M.D.* and *A. Charles Winkelman, M.D.*

The hospital has received accreditation as a Level I Trauma Center by the Pennsylvania Trauma Systems Foundation.

The College of Physicians of Philadelphia
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1984–1986

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Audit Committee

John D'Aprix

Henry J. Tumen, M.D., *Chairman*
George P. Rosemond, M.D.

Meeting Schedule: At Call of Chairman

Committee on Budget and Finance

Daniel L. Shaw, Jr., M.D., *Chairman*

Mark W. Allam, V.M.D.	Marshall B. Guthrie, M.D.	Jonathan E. Rhoads, M.D.
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Arthur M. Dannenberg, M.D.	Paul Nemir, Jr., M.D.	Henry J. Tumen, M.D.
Herbert A. Faust, M.D.	Robert S. Pressman, M.D.	Mrs. Christine Webber

Meeting Schedule: Third Wednesday, 1:00 P.M.

Committee on By-Laws and Ordinances

Palmer H. Futcher, M.D., *Chairman*

Frank P. Brooks, M.D.	Robert J. Gill, M.D.
Edward S. Cooper, M.D.	Karl F. Rugart, M.D.

Meeting Schedule: At Call of Chairman

Committee on Publications (Editorial Committee)

Robert Austrian, M.D., *Chairman*

Whitfield J. Bell, Jr., Ph.D.	John L. McClenahan, M.D.	Fred B. Rogers, M.D.
George Ross Fisher, M.D.	Jonathan E. Rhoads, M.D.	Charles E. Rosenberg, Ph.D.

Meeting Schedule: At Call of Chairman

Committee on Fellowship

Joseph A. Wagner, M.D., *Chairman*

Herman Beerman, M.D.	Horace MacVaugh, III, M.D.	Brooke Roberts, M.D.
Adolph H. Bleier, M.D.	Karl R. Meyers, M.D.	George P. Rosemond, M.D.
Robert V. Cohen, M.D.	Timothy J. Michals, M.D.	Linwood F. Tice, D.Sc.
William H. Dickerson, D.O.	Edward J. Resnick, M.D.	Margaret Gray Wood, M.D.
Philip B. Kimbel, M.D.		

Meeting Schedule: Second Tuesday, 3:30 P.M.

Report of the Committee on Fellowship

Fellows Elected in 1986

V. Paul Addonizio	Steven J. Davidson	David B. P. Goodman
Robert D. Aiken	Thomas L. Dent	Estella F. Graeffe
Evangelos T. Angelakos	Joseph A. Dieterle	Howard T. Harcke
James A. Batts, Jr.	Lillian D. Dunsmore	William D. Kimler
Arnold Bayer	Richard A. Dunsmore	Frederick L. Kramer
Robert E. Booth, Jr.	Julius Ellison	John S. Kukora
Stanley E. Bradley	Carolyn S. Ernst	Ralph R. Landes
Elizabeth B. Brown	Claire M. Fagin	Harvey B. Lefton
David M. Carter	James J. Ferguson	Robert M. Lester
John R. Clarke	Leonard H. Finkelstein	Charles E. Letocha
Sidney L. Cohen	Leonard A. Frank	Robert E. Mancini
James B. Couch	Matthew C. Frankel	Gerald A. Mandell
John M. Daly	Jeffrey S. Freeman	Joseph T. Marconis

Elizabeth L. McGee
Gordon K. McLean
Charles F. Milon
William G. Minster
James M. Oleske
Robert H. Palmer
Stephen R. Permut
Harold E. Pierce
John D. Pigott
Stanley A. Plotkin
Henrietta K. Rosenberg
Henry Rosenberg
Jean-François Rossignol
Ursala L. Scinige
Sanford J. Shattil
Francis J. Shea
Estherina Shems
Robert M. Stein
James L. Stinnett
Elliot J. Sussman
James H. Thorpe
Susan L. Williams
Doris Willig
J. Brendan Wynne
Giuseppe G. Zina
Robert B. Zurier

Fellows Deceased in 1986

Alfred Bongiovanni
Henry S. Bourland
William F. Bouzarth
James A. Collins
John F. Coppolino
Samuel L. Cresson
Everett R. Curran, Jr.
Anthony J. Dimarino
Mary Hoskins Easby
Michael M. Etzl
Norman T. Felberg
Harry Fields
Aaron Fishman
Lewis B. Flinn
George A. Hahn
Thomas N. Haviland
Martin F. Hayes
Joseph Hayman, Jr.
Carl T. Houlihan
Joseph Hughes
Max D. Kasser
Woodrow Lindenmuth
Patricia Mansure
John Royal Moore
George P. Pilling IV
William J. Rashkind
James H. Robinson
Norbert J. Schulz
Hammell P. Shipps
Edward I. Siegal
Alexander Silverstein
Helen B. Taussig
Mary Gibbon Thompson
Ulysses E. Watson
Mrs. John Wintersteen
Alfred C. Wood

Present Membership

Resident Members	1,500
Nonresident Members	328
Associates	262
Honorary Members	22
Honorary Associates	9

Committee for the Francis C. Wood Institute for the History of Medicine

Stewart G. Wolf, Jr., M.D., *Chairman*

Robert Austrian, M.D.
Harold D. Barnshaw, M.D.
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Vaughn P. Simmons, M.D.
Rosemary Stevens, Ph.D.
Frederick B. Wagner, Jr., M.D.
Francis C. Wood, M.D.

Meeting Schedule: Fourth Tuesday, Odd Months, 10:30 A.M.

Report of the Francis C. Wood Institute

Conferences and Edited Volumes

The 1986 national conference at the Institute, entitled "Grand Rounds: 100 Years of Internal Medicine," was a survey by practitioners and historians of the forces that have shaped the development of that specialty in the United States. The opening address by Paul Beeson, M.D., "The Inner History of Internal Medicine," offered an insider's view of the spectacular rise of internal medicine in the twentieth century. There followed several sessions on the subspecialties of internal medicine: Joel Howell, "The Changing Face of Twentieth-Century American Cardiology"; Steven Peitzman, "Nephrology in America from Thomas Addis to the Artificial Kidney"; Diana E. Long, "Endocrinology in American Medicine, 1891–1951"; Edward H. Kass, "History of the Specialty of Infectious Diseases in the U.S.A."; Joseph B. Kirsner, "One Hundred Years of American Gastroenterology"; and Thomas G. Benedek, "A Century of American Rheumatology," describing the growth of those scientific fields. Bruce Fye discussed "The Literature of Internal Medicine"; Steven Kunitz, the "Classifications in Medicine"; and Harry M. Marks, "Notes from the Underground: The Social Organization of Therapeutic Research." The institutions of internal medicine were discussed by Palmer H. Futcher, "The American Board of Internal Medicine"; A. McGehee Harvey, "The Association of American Physicians"; Edward C. Rosenow, Jr., "The American College of Physicians"; and William Felch, "The American Society of Internal Medicine." The meeting concluded with a look at the past, present and future of internal medicine by Rosemary Stevens, entitled "The Curious Career of Internal Medicine: Functional Ambivalence, Social Success."

A dinner honoring Dr. Francis C. Wood was held on Friday, March 28. The conference was organized by Russell Maulitz, M.D., a Fellow of the College, and Diana E. Long.

The Henry J. Kaiser Family Foundation, the Benjamin and Mary Siddons Meacey Foundation, and the Josiah Macy, Jr., Foundation provided funding for the conference.

Fellowship Program

Our first Rockefeller Foundation Fellow, Harry Marks, has been in residence since September 1986. His project is "The Idea of an Experiment." Two Fellows will be selected for 1987–1988.

Research

Diana E. Long has three articles forthcoming:

1. "Thomas Eakins' THE AGNEW CLINIC: a World We Have Lost?" *Prospects,* Winter 1988;
2. "The 'Physiological' Identity of American Sex Researchers between the two World Wars," in Gerald Geison, ed., *American Physiology Comes of Age,* Press of the American Physiological Society, 1987.
3. "Historical Perspectives on Endocrinology in American Medicine," *Grand Rounds: 100 Years of Internal Medicine,* University of Pennsylvania Press, 1987.

Professional and Public Service

On a national level, Dr. Long has been the organizer and chair of the committee of the History of Science Society on Unaffiliated Scholars. In 1986 Janet Golden became the chair of the local arrangements committee for the national meeting of the American Association for the History of Medicine to be held at the College in 1987. She has convened an active committee of local historians, including staff and Fellows of the College to plan this meeting of about 400 people.

Staff

The new Administrative Assistant at the Wood Institute is Elizabeth Joyce. The Research Assistant is Virginia Montijo, a recent graduate of St. Joseph's University.

Diana E. Long
Director

Hall and Grounds Committee

John T. Deininger, M.D., *Chairman*

Peter J. Devine, M.D.
Darwin W. Ferguson (A)
Marc Lapayowker, M.D.
Norman Makous, M.D.
Mrs. Paul Nemir
Leslie Nicholas, M.D.
Steven J. Peitzman, M.D.
Robert E. Weibel, M.D.
Charles E. Wolferth, Jr., M.D.
Mrs. J. Edwin Wood

Meeting Schedule: Third Friday, Odd Months

Library Committee

Peter J. Koblenzer, M.D., *Chairman*

Howard Y. Ando, Ph.D.
Robert Austrian, M.D.
Herman Beerman, M.D.
Shirley S. Bloom, M.D.
Patricia F. Borns, M.D.
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Herbert Cohen, M.D.
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Palmer H. Futcher, M.D.
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John J. B. Light, M.D.
John R. Park, (A)
Robert S. Pressman, M.D.
Alexander Price, D.O.
Samuel X. Radbill, M.D.
Mrs. Carolyn Raymond
Robert D. Reinecke, M.D.
George P. Rosemond, M.D.
William K. Sherwin, M.D., Ph.D.
Alvin M. Soffe, M.D.
Stewart G. Wolf, Jr., M.D.

Meeting Schedule: First Thursday, Even Months, 4:00 P.M.

Rare Book Sub-Committee

Richard W. Foster, *Chairman*

Joseph T. Freeman, M.D.
Peter J. Koblenzer, M.D.
Irwin J. Pincus, M.D.
Robert S. Pressman, M.D.
Samuel X. Radbill, M.D.

Meeting Schedule: At Call of Chairman

Committee on the Mütter Museum and College Collections

Robert H. Bradley, Jr., M.D., *Chairman*

Henry Abrams, M.D.
Mrs. Emma Beerman
Bernard Behrend, M.D.
David Bronstein, D.O.
C. Nelson Davis, M.D.
J. Paul Decker, M.D.
Henry M. Drinker, M.D.
Edwin J. Foltz (A)
Andras L. Korenyi-Both, M.D.
Mrs. Pamela Mansure
Alma Dea Morani, M.D.
Leslis Nicholas, M.D.
Charles M. Norris, M.D.
Lawrence Charles Parish, M.D.
Mrs. Reba Pressman
Howard H. Steel, M.D.

Meeting Schedule: Second Wednesday, 4:00 P.M.

Committee on Planning and Development

Robert Austrian, M.D., *Chairman*

George I. Blumstein, M.D.
Lewis W. Bluemle, Jr., M.D.
Herbert A. Faust, M.D.
John H. Hodges, M.D.
Arthur C. Kaufmann (A)
Brooke Roberts, M.D.
Jonathan E. Rhoads, M.D.
George P. Rosemond, M.D.
Daniel L. Shaw, Jr., M.D.
George L. Spaeth, M.D.

Meeting Schedule: First Tuesday, 4:00 P.M.

Committee on Public Health and Preventive Medicine

Paul D. Stolley, M.D., *Chairman*

Donald J. Balaban, M.D.	Herbert Hazan	Robert Sharrar, M.D.
Georgina Faludi, M.D.	Lewis W. Polk, M.D.	Ann O'Sullivan, R.N.
Ira W. Gabrielson, M.D.	Raymond Q. Seyler, M.D.	

Meeting Schedule: Third Thursday, Even Months, 3:30 P.M.

Committee on Scientific Affairs

George L. Spaeth, M.D., *Chairman*

Doris G. Bartuska, M.D.	Joseph S. Gonnella, M.D.	William N. Mebane III, M.D.
Baruch S. Blumberg, M.D.	C. William Hanson, Jr., M.D.	Mrs. Carolyn Raymond
Mary Stuart Fisher, M.D.	Wallace G. McCune, M.D.	Edward J. Stemmler, M.D.

Meeting Schedule: At Call of Chairman

Bicentennial College Night Programs

September 10, 1986
"Insanity: Evolution of a Medico-Legal Concept" (Kenneth Appel Memorial Lecture)
Robert L. Sadoff, M.D.
Clinical Professor of Psychiatry, University of Pennsylvania School of Medicine

October 1, 1986
"The Impact of New Discoveries on the Cost and Quality of Medical Care"
Duncan Neuhauser, M.D.
Professor of Epidemiology and Bio-Statistics
Case Western Reserve University

November 5, 1986
"Science, Medicine and Ethics in the 21st Century"
Edmund Pellegrino, M.D.
Professor of Medicine and Director, Kennedy Institute of Bioethics
Georgetown University

December 3, 1986
"The Impact of Physician Liability on the Quality of Patient Care"
Clark Hovighurst, Esq.
Professor of Law and Public Safety
Duke University

January 7, 1987
"Medical Care of the Disenfranchised"
William Walsh, Sr., M.D.
President, Project HOPE

February 4, 1987
"Preventive Medicine: A Critical Evaluation"
Howard H. Hiatt, M.D.
Dean, Harvard School of Public Health

March 4, 1987
"The Impact of HMOs and DRGs on the Quality of Patient Care"
Walter J. McClure, Ph.D.
President, Center for Policy Studies

April 1, 1987
"Medical Practice in the 21st Century: Profession or Business"
Francis D. Moore, M.D.
Professor of Surgery (Emeritus), Harvard Medical School

May 6, 1987
"Perspectives on Human Obesity"
Albert J. Stunkard, M.D.
Professor of Psychiatry, University of Pennsylvania School of Medicine

October 7, 1987
"Medical Education: Problems and Opportunities"
Alvin R. Tarlov, M.D.
President, Henry J. Kaiser Family Foundation

November 20–21, 1987

Two-day bicentennial symposium on progress and challenges in the care of the most frequent causes of death in cardiovascular diseases, cancer and trauma

Women's Committee
1986

Mrs. Robert S. Pressman, *Chairwoman*

Mrs. William Hanson, Jr., *Vice Chairwoman* — Mrs. John Webber, *Treasurer*

Mrs. Keith Fischer, *Recording Secretary* — Mrs. Paul Nemir, Jr., *Corres. Secty*

Meeting Schedule: First Tuesday, 10:00 A.M.

Report of the Women's Committee

In 1987 the Women's Committee will celebrate its 16th anniversary. Since its inception the Women's Committee has contributed greatly to the enhancement of the College halls and rooms. In 1974 the College bore hardly any resemblance to its appearance today. The building was always an architectural gem, but it was badly in need of refurbishing and redecorating. The rooms were used primarily for College business and Fellows meetings, lectures, etc. In recent years the building has become one of Philadelphia's most sought after locations for weddings, private parties, celebrations and various other functions, official and social. One only had to watch the TV. presentation, "Managing Our Miracles," to sense the beauty and dignity of the surroundings and to realize why Mitchell Hall was chosen as the location for this memorable production.

This transformation has taken a great deal of time, energy and money to achieve, and we are very proud and pleased that we have been able to contribute to this vital institution.

Our membership has been increasing slowly but steadily, and we have a core of hardworking people who support our programs and endeavors. The Women's Committee has given approximately $100,000.00 to the College since 1979. These funds have been raised in a variety of ways. We have an Annual Book Sale, Lectures and Lunches, trips to interesting places, a Friends Appeal, a Remembrance Fund, an Annual Cooking Demonstration and anything else we can think of that is fun, entertaining and educational. This year the Committee is sponsoring a Gala, the 200th Anniversary Ball, which will celebrate the beginning of the third century for the College.

The Women's Committee welcomes into its membership people who are interested in the College and in being a part of this remarkable institution, which for 200 years has gathered together in one magnificent building the best and the brightest that Philadelphia, the country and in fact the world have to offer. It is indeed a privilege to be counted among its supporters.

Section on Dermatology

Joseph A. Witkowski, M.D., Chairman — Caroline S. Koblenzer, M.D., Clerk

Report of the Section

The requirements for membership in the Section are only that the individual have a professional interest in, and a respect for, dermatology; in addition to physicians who have completed residency training in the field, we have among our membership other interested scientists, including veterinarians, pharmacologists, basic scientists and the like.

The format of our meetings is a scientific presentation by a guest speaker who has distinguished himself or herself in some aspect of dermatology, followed by a cocktail hour and subscription dinner that is also attended by spouses. Generous support from pharmaceutical firms has enabled us from time to time to invite residents in dermatology from the various training programs in the city. We hold four or five meetings each academic year at the College on Wednesday evenings.

We have had a total of twenty meetings. Our speakers this year so far have been Milton Viederman, M.D., head of the Liaison Psychiatry service at the New York Hospital and Cornell Medical School, who showed a very instructive videotape demonstrating interviewing techniques in a patient with AIDS, and Dr. Michael Fisher, Head of the Unified Division of Dermatology at Albert Einstein College of Medicine in New York, who gave an excellent presentation on "The Medically Ill Patient with Fever and a Rash." In January we had Dr. Maureen Poh-Fitzpatrick, a recognized expert on the Porphyrias, and March brings Dr. Albert Kligman, who is well known to all of us and who can be relied on to provide stimulation and challenge. In late April our final meeting for the 1986–87 academic year will be a historical presentation by Lawrence Charles Parish, M.D., of Thomas Jefferson University; this presentation will be the Section on Dermatology's contribution to the Bicentennial Celebration of the College.

Our membership currently stands at around 100, and our dues are $35.00 per annum.

Our first five and one half years have been singularly successful, and we look forward to many more exciting seasons to come.

Caroline S. Koblenzer, M.D.
Clerk of the Section

Section on Geriatrics and Gerontology

Jay Roberts, Ph.D., Chairman — Willard A. Krehl, M.D., Clerk

Report of the Section on Geriatrics and Gerontology

There are about sixty members in the section. Under the Bylaws, membership is open to Fellows and non-Fellows, with two elected Officers, Chair and Clerk, who must be College Fellows. The Bylaws require that a new Section be endorsed by a minimum of fifteen Fellows. Subsequently, it was increased by the addition of non-Fellows as a voluntary dues-supported group that serves under the College Bylaws, which permit considerable latitude for scientific inquiry.

Membership is open to Fellows and non-Fellows. Annual dues as well as donations in honor of someone or as memorials come under the tax-deductible status of the College.

Program

June 11, 1986
"Treatment of Urinary Tract Infections in the Elderly"
Donald Kay, M.D.
Medical College of Pennsylvania

October 28, 1986
Symposium: Aging in the United States in the Eighties
Richard Edie, M.D.
Hospital of the University of Pennsylvania

John Rowe, M.D.
Harvard University

Harry Moody, M.D.
New York, N.Y.

Willard A. Krehl, M.D.
Clerk

Section on Insurance Medicine

William F. X. Coffey, M.D., Chairman — William C. Beck, Jr., M.D., Clerk

The Section meets twice a year, in the spring and fall.

Section on Medical History

Allen C. Wooden, M.D., Chairman — A. Michael Broennle, M.D., Clerk

Report of the Section on Medical History

The Section on Medical History has ninety regular and sixteen student members. We made a change in the format this year, scheduling one speaker instead of two, followed by the traditional reception and dinner. Attendance at the dinners averaged thirty-three.

Many members of the Section are working on the Local Arrangements Committee preparing for the 1987 Annual Meeting of the American Association for the History of Medicine in Philadelphia, under the leadership of Janet Golden, Ph.D., from the Francis C. Wood Institute for the History of Medicine.

In reviewing the 1985–86 Program, we note the cancellation of the Joint Meeting with the Philadelphia Allergy Society because of unforeseen schedule conflicts for our speaker, Dr. Sheldon G. Cohen, from the N.I.H.

Program

September 17, 1986
"Victor Robinson, M.D. (1886–1947): A Centennial Tribute to a Pioneer Medical Historian"
Fred B. Rogers, M.D.
Temple University School of Medicine

October 15, 1986
"History of Forensic Pathology Based on the MOVE Incident and Dr. Joseph Mengele"
Ali Z. Hameli, M.D.
Chief Medical Examiner, Wilmington, DE.

November 19, 1986
"The Medicine Show"
William H. Gelfand
New York, NY

March 12, 1987
The Kate Hurd Mead Lecture
"Science and Medicine in the Social Construction of Woman: From Aristotle to Corpus Callosum"
Ruth Bleier, M.D.
University of Wisconsin, Madison, WI

April 8, 1987
The Samuel X. Radbill Lecture
"Philadelphia Physicians and the Development of Medical Photography"
Stanley B. Burns, M.D.
New York, NY

April 30–May 3, 1987
Annual Meeting of the American Association for the History of Medicine, cohosted by the Francis C. Wood Institute for the History of Medicine and the Section on Medical History

A. Michael Broennle, M.D.
Clerk

Section on Otolaryngology

Ernest L. McKenna, Jr., M.D., Chairman — Max L. Ronis, M.D., Clerk

Report of the Section

Scheduled programs and speakers are as follows:

Program

November 11, 1986
"Evaluation and Surgical Management of Facial Nerve Paralysis"
Stephen A. Talain, M.D.
Hospital of the University of Pennsylvania

"3-Channel Lissajous Trajectory of the Auditory Brainstem Response"
William H. Martin, Ph.D.
Temple University Hospital

"Nasolabial Flap Reconstruction of the Anterior Floor of the Mouth"
William A. Keane, M.D.
Pennsylvania Hospital

February 10, 1987
"Photodynamic Therapy for Head, Neck and Lung Tumors"
Rose Mohr, M.D.
Temple University

"Endolymphatic Surgery for Meniere's Syndrome"
Diran O. Mikaelian, M.D.
Temple University Hospital

"Sinus Mucocele Surgery—the Kaspar Approach"
Martin Brennan, M.D.
Mercy-Catholic Medical Center

April 21, 1987
"Intra-operative Monitoring of Sensory-Evoked Responses"
Daniel M. Schwartz, Ph.D.
Hospital of the University of Pennsylvania

"Atypical Vascular Causes of Vertigo"
J. David Cunningham, M.D.
Bryn Mawr and Lankenau Hospitals

To be Announced
David Zwillenberg, M.D.
Thomas Jefferson University

Max L. Ronis, M.D.
Clerk

Medicine and Society

Organizing Committee
Raymond Q. Seyler, M.D., *Chairman*
George I. Blumstein, M.D. William L. Kissick, M.D., Dr. P.H.

Program
"Health Care: Theirs and Ours"

October 7, 1986
"The United Kingdom"
William L. Kissick, M.D., Dr. P.H.

George Seckel Pepper
Professor of Public Health and Preventive Medicine
School of Medicine
Professor of Health Care Systems
The Wharton School
University of Pennsylvania

October 21, 1986
"The People's Republic of China"
John E. Fryer, M.D.
Professor of Psychiatry
Temple University Medical School and Hospital

November 18, 1986
"Scandinavia"
Bernard S. Bloom, Ph.D.
Research Associate Professor
Department of Dental and Health Care Services
University of Pennsylvania

December 2, 1986
"Canada"
Sidney S. Lee, M.D.
President, Milbank Memorial Fund
New York, New York

The Facilities of the College were also regularly used by:

The Delaware Valley Ophthalmological Society
The Delaware Valley Society for Gastro-Intestinal Endoscopy
The Greater Philadelphia Committee for Medical-Pharmaceutical Science
The Obstetrical Society of Philadelphia
The Pathology Society of Philadelphia
The Philadelphia Academy of Cardiology
The Philadelphia Academy of Surgery
The Philadelphia Allergy Society
The Philadelphia Laryngological Society
The Philadelphia Neurological Society
The Philadelphia Orthopedic Society
The Philadelphia Rheumatological Society
The Philadelphia Roentgen Ray Society
The Philadelphia Urological Society
The St. George Oral Cancer Society

Reunion Notice

A reunion of patients formerly treated for tuberculosis at Saranac Lake, N.Y. will be held on August 20–22 in that town. The honorary chair-persons will be Francis B. Trudeau, Jr., M.D., Gordon Meade, M.D., Mrs. D. Mott Chapin and Edward H. Worthington, Jr. Those interested in attending will find encouragement by writing T.B. Reunion, Historic Saranac Lake, Box 1030, Saranac Lake, N.Y. (518/891-0971).

Publication Available

The National Library of Medicine has just published a short pamphlet, *A Biomedical Index to the Correspondence of René Descartes,* prepared by Thomas S. Hall. Single copies are available to scholars without charge. Address requests to: Chief, History of Medicine Division, National Library of Medicine, 8600 Rockville Pike, Bethesda, Maryland 20894, U.S.A.

TRANSACTIONS & STUDIES

COLLEGE OF PHYSICIANS
OF PHILADELPHIA
JUN 25 1987

of

THE COLLEGE OF PHYSICIANS
OF PHILADELPHIA

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Series V Volume IX Nº 2 June 1987

TRANSACTIONS & STUDIES

of

THE COLLEGE OF PHYSICIANS
OF PHILADELPHIA

MEDICINE & HISTORY

Series V Volume IX Number 2 June 1987

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ISSN 0010–1087

John L. McClenahan, *Editor*

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Authors should submit two copies, typed on one side of 8½ × 11 inch paper; all material, including quotations and references, should be double-spaced. A short summary of the paper should also be included. *Transactions & Studies* accepts either footnotes or references, but either must be in accordance with the guidelines in *A Manual of Style* (Chicago: University of Chicago Press, 1969), 12th edition. Prospective authors are encouraged to examine back issues of *Transactions & Studies* to familiarize themselves with the format of the journal.

Photographs and other illustrations may be included. Tables must be typewritten on separate sheets; they should be prepared professionally before submission.

Please address any queries concerning the format of *Transactions & Studies* to the Editor.

* * *

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Medicine and Society. A Symposium

In the fall of 1982 a group within The College favored informing the laity of the momentous changes occurring in the practice of medicine. A grant was obtained from the Myer H. Goldman Foundation to finance a series of lectures under the general theme of *Medicine and Society* to consider these changes and mechanisms financing them. Under the aegis of the Committee on Public Health and Preventive Medicine, a program entitled "Preparing for Retirement" was presented in October 1983. A second offering on Executive Health was given in the spring of 1984.

The following summer an *ad hoc* committee was formed to develop and administer a series of programs. Five programs of four lectures each, under the overall provocative titles of "The Aging Process"; "Consumer Involvement in Health Affairs"; "Medical Dilemmas and Consumer Choice"; "Changing Lifestyles"; and "Health Care — Theirs and Ours" were presented. The series has been noted for the high caliber of the speakers and for the manner in which the material was delivered.

This issue of *Transactions & Studies* publishes three of the dissertations presented at the fifth and last program, which compared our health care system with those of other countries, including the United Kingdom, Scandinavia and Canada.

Public lectures, particularly on disease entities, have proliferated and are now being sponsored by hospitals, medical schools and even by individual or groups of specialists, calling attention to the specialized facilities of these groups and the conditions being treated. The purpose of the College was to inform the general public of some of the broad issues of health affairs that are going to affect them. Our series has concluded coincidentally with the launching of the Bicentennial celebration of the College. What can we expect of the Third Century? There is a sense of determination and resolve among the

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leadership to participate and help guide policies that will influence every dimension of health care. The physician-patient relationship is indeed a sacred trust. The College has sought to contribute to a broader and more sympathetic relationship between physicians and the public.

Raymond Q. Seyler, M.D., Chairman
George I. Blumstein, M.D.
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19 South 22nd Street
Philadelphia, PA 19103

The British National Health Service: Foil, not Prototype

WILLIAM L. KISSICK

During a sabbatical year in the United Kingdom as a Visiting Professor at Guy's Hospital Medical School and the London School of Economics and Political Science, I found myself learning a great deal about the way we do things as seen through the eyes of my English, and to a lesser degree, Scottish and Welsh colleagues. Although it would be preferable to ask one of them to describe the American health care enterprise as they see it, I have elected to report on the similarities and dissimilarities between the health care systems in our respective societies in order to "see ourselves as others see us."

Comparisons

There are several ways to tell the story of the similarities and contrasts between the health care systems of the United Kingdom and the United States. Let's begin with nine selected generalizations by way of introduction to our two systems.

1. Mode of Practice

In our society approximately two thirds of physicians are medical specialists. In the United Kingdom the reciprocal is true, with the majority in general practice.

2. Compensation

The predominant mechanism for paying physicians in the United States is fee-for-service. In the United Kingdom specialists are compensated on salaries budgeted through hospitals where they have consultant appointments; general practitioners receive practice allowances (salary subsidies), capitation payments per enrollee per month (for a total of 60 percent of annual income), and fees for priority services — for example, family planning, cancer screening, and immunizations.

3. Access to Medical Care

General practitioners in the British National Health Service are responsible for defined populations of patients enrolled on their panels

Adapted from an address for the Medicine and Society Lecture Series, "Health Care: Theirs and Ours," at the College of Physicians of Philadelphia on October 7, 1986.

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of approximately 2,300. Access to specialists is by general practitioner referral. In the United States one has virtually random access to any generalist or specialist physician.

4. Physician Practice

Solo practice predominates in the United States with increasing HMO, PPO, and hospital physician joint ventures. Although less structured, there are many similarities in the United Kingdom, with most practitioners, until recently, being primarily in solo practice; small (two or three) physician partnerships are on the increase. Specialists occupy salaried posts in hospitals.

5. Institutional Patterns

The United States has traditionally favored community hospitals with a recent emergence of multi-hospital systems both voluntary and investor-owned. In the United Kingdom, the mechanism for distributing resources is governmentally operated hospitals on a regional basis.

6. Goals and Objectives

The strategy in the United Kingdom is one of access, equity and community orientation. The American health care system encourages institutional quality to provide the best for those who gain access.

7. Source of Health Care Dollars

Despite recent expansion in the privatization of health care in the United Kingdom, almost 90 percent of the health care dollar comes from general revenues, and the remainder from voluntary insurance or out-of-pocket. In the United States, 42 percent is from government, 28 percent from third party, and 30 percent out-of-pocket.

8. Resource Consumption

The United States spends approximately twice as much of its Gross National Product (10.7 percent) as does the United Kingdom (6.2 percent).

9. Health Status

By current measures of longevity, age specific mortality rates and functional capacity, the health status of the two societies is virtually identical.

Oscar Wilde wrote, "England and America are two vast countries separated by a common language." After a year of learning the language in the United Kingdom as well as studying their history, culture, and social institutions (particularly the health care system), I have concluded that the language is probably the thing we have most in com-

mon. Though our biomedical and technological foundations are identical, the social, cultural, economic and political institutions that shape our approach to medical care are quite dissimilar.

Population

The population of the United States (238 million) is more than four times that of the United Kingdom (56 million). Density of population in the U.S. is 66 persons per square mile; in the United Kingdom the figure is 599. Ten of our states have a larger area than the entire United Kingdom.

The United Kingdom's 56 million people would fit rather snugly into Oregon, our tenth largest state, whose population is 2.6 million. The 25 percent of the population residing in London in the south of England can reach their Edinburgh cousins in Scotland in approximately six hours by high-speed train.

In his book, *The Hidden Dimension,* Edmund Hall, an anthropologist, analyzes variations in perception of space among people and the impact of that mindset on behavior. Americans and Englishmen have been raised in different geographic and population milieus. Concepts of discipline, authority, movement and opportunity are undoubtedly derivative.

Most planners would find less difficulty in conceptualizing a National Health Service for Oregon or New England and the adjacent third of New York than for fifty states whose borders, not counting Alaska and Hawaii, stretch from the Atlantic Ocean to the Pacific. One large Veterans Administration for the vast structure of the United States seems formidable, if not impossible. Among other things, the geographic scale in the United Kingdom permits the National Health Service to employ rail and road as well as other means of travel for whatever purpose they wish to pursue. No more than four regional head trauma centers concentrate the highly specialized resources for these injuries.

The Lessons of History

A tourist in London soon recognizes its pervasive pageantry that reflects the nation's history. The National Health Service has been shaped by that history; perhaps in no area is the contrast between our societies more dramatic. Prince William, the elder son of Prince Charles and Lady Diana, can trace his ancestry to the ninth century, 700 years

before Columbus. The monarchy is in its 1,200th year, roughly three times the interval since the passengers on the *Mayflower* landed on Plymouth Rock. The contrast in the history of health care is illustrated by St. Bartholomew's Hospital, founded in London in 1270, and the Pennsylvania Hospital, organized by Benjamin Franklin as the first hospital in the Colonies in 1751. These are mere samples of accumulated precedents in our two societies, which, like great glaciers, imperceptibly shape the character of our institutions.

When I first visited the Gallery of the United States Senate, a colleague pointed out Senator Carl Hayden on the floor. He was Chairman of the Appropriations Committee, one of the most powerful positions in the legislative branch of our government, and had been elected to his first term in the House of Representatives in 1912, the year Arizona was admitted to the Union. At the time he had been serving as Sheriff of Maracopa County and was sworn in with his six-gun strapped to his side. Only then did I really appreciate the fact that our western frontier had not closed until the 1890s.

What does all this suggest? History records a tradition, expectation and norms for behavior. The differences discussed below reflect a tradition that has evolved historically over centuries. Perhaps the most important for the National Health Service as well as the American Health Care Enterprise are *the patterns of expectation among people in their relations with one another.*

Tradition

The role of social class in the United Kingdom contributes to both structure and discipline. Recent colonial immigration notwithstanding, the English are predominantly Anglo-Saxon. Their values and expectations are much more predictable than those resulting from the melting pot in our society with its cultural heterogeneity and disparate values.

We in the United States treasure our society for its diversity. We value social mobility; all boys or girls, no matter how humble their origins, can aspire to the White House. There is no question in the United Kingdom as to who is going to live in Buckingham Palace. Royalty, nobility, Oxbridge elitism and fairly firm class structure contrast with the ideal, at least of opportunity, in the United States.

The pluralism in our society is reflected in the American Constitution and its deliberate separation of powers among the executive,

legislative and judiciary. The United Kingdom, with a parliamentary form of government, combines executive and legislative; the body that drafts and proposes legislation has majority control of the Parliament that enacts it. The laws are implemented by a strong civil service representing continuity among governments that stand in opposition. The potential for enacting, revising and implementing rests with an advantage for the parliamentary government. One need only view some health initiatives drafted between Congress and the Administration over the years to see the problems with management of large, complex systems.

Authority is consulted and respected in the United Kingdom. In our society, freedom of choice is the priority. The individual is encouraged to seek out options and select from among them. This is not necessarily to argue that authority is lacking in our society, but only that it does not have the same dimensions as in the United Kingdom.

When a British general practitioner sees a patient, reaches a preliminary conclusion, prescribes and requests the patient to return in ten days, the probabilities are very high that the patient will do as instructed, take the medicine and return in ten days. The American counterpart might well seek a second or yet a third opinion and never be seen again. *The authority of the physician is fundamental in the National Health Service.*

During my sabbatical I often walked from our home in Chelsea to the London School of Economics. Proceeding up the King's Road one morning, my attention was caught by a bus stop. I noticed that people were standing in an orderly line reading newspapers or magazines and occasionally chatting. When the bus arrived, passengers would disembark and others would begin to board from the front of the line.

At that point I paused to reflect on a similar scene in Philadelphia at the corner of 13th and Market Streets. From recollection I perceived a mass of would-be bus riders milling cheek on jowl while waiting for the bus. Its arrival and the opening of the doors would result in a feverish struggle for priority.

In the United Kingdom each individual respects another's place in the queue just as he expects his place to be respected. In my opinion the tradition of the queue is fundamental to the National Health Service. If the British stopped queuing, the NHS would collapse.

National Health Service Act

The National Health Service Act, passed by Parliament in 1946, had its origin in World War II. A determination by the British people to pull together in response to their personal suffering during that conflict was expressed in many social programs. Health care was nationalized as one of many industries. After almost four decades the British National Health Service remains one of the most popular programs in the entire society. That is not to say that there aren't shortcomings, frustrations and complaints on the part of patients and physicians alike, but the electorate strongly supports the NHS.

How to go about designing and implementing the program?

The British National Health Service Act called for the Minister of Health "to promote the establishment in Great Britain of a comprehensive health service." The characteristics of the society, together with the historical precedents they reflect, suggested ways in which the Minister of Health could go about the establishment of such a thing. The organization launched on July 5, 1948, functioned with only minor revisions for twenty-six years. (*Fig. 1*)

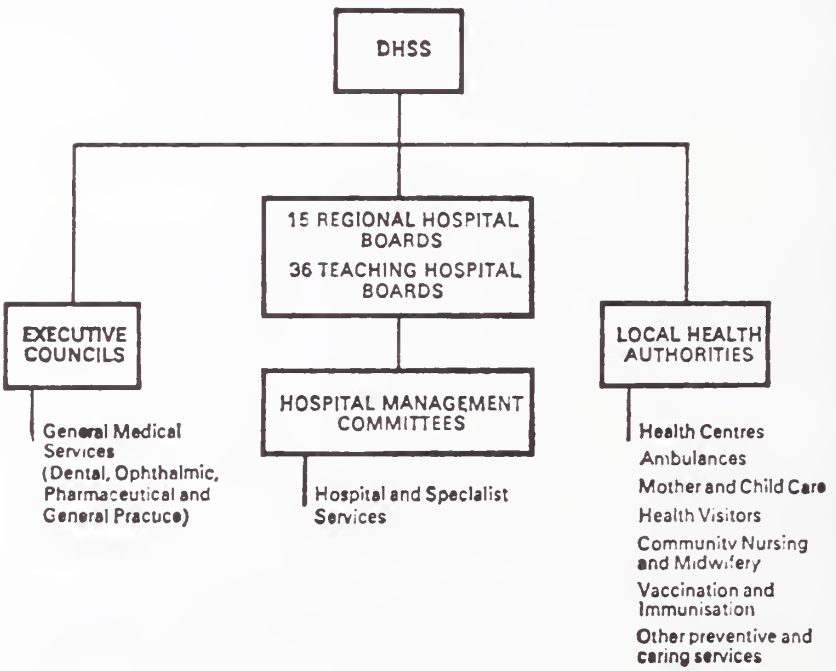

Figure 1. The NHS Structure, 1948-1974. Source: The NHS Reorganization. Office of Health Economics. London 1974.

Three units were directly responsible to the Department of Health and Social Security for the provision of health services.

1. The general practitioner services.
2. The hospital and consultant services.
3. Community health services.

They are not unlike the health and medical services available in the United States but with certain dramatic differences in organization.

The hospital services were organized as fifteen Regional Hospital Boards and their derivative Hospital Management Committees. All hospitals were nationalized. Many were already public institutions. Voluntary hospitals were suffering from severe capital problems, as they had virtually no infusion of financial resources during the Depression or World War II. In a compromise with the government thirty-six Teaching Hospital Boards remained separate rather than under the control of Regional Hospital Boards. Several of these were permitted to keep existing endowments.

Traditionally in the United Kingdom specialists occupied staff positions on hospitals and these were maintained. Further, in a compromise between government and the specialties societies, the consultants were permitted to choose a contract with the Regional Hospital Boards or Teaching Hospital Boards for from five half days to eleven half days of salaried employment. This was particularly attractive to London consultants who maintained a part-time private consulting practice in places such as Harley Street. Most of my academic colleagues during my sabbatical had signed contracts for nine half days with the National Health Service while retaining two half days per week for private consulting. Specialists were permitted to admit private patients to pay beds in the teaching hospitals they served on contract. This arrangement could be construed as comparable to arrangements with full-time academic physicians in the United States who are permitted to keep a portion of the fees they collect for treating patients as part of their teaching and research responsibilities. Regionalization is the main dimension of this approach to organization, in which there was an effort to establish relationships between what we would call community hospitals and the referral or tertiary institutions.

In organizing the general practitioner service, the National Health Service drew on a precedent established during the administration of Lloyd George in 1911 in which workers were covered for physicians' services by a capitation payment. The Executive Councils (*Fig. 1*)

were the vehicles for distributing capitation payments to general practitioners for patients enrolled on their panels as well as payment for dental, optometric and pharmaceutical services. Over the years the payment mechanisms have been modified to comprise practice allowances or salary subsidies, capitation payments accounting for 60 percent of a general practitioner's income, and the fees for priority services such as family planning, cancer screening, immunization and home visits for the elderly.

Perhaps most importantly the NHS maintains health services on a gatekeeper function by the general practitioner, who controls access to hospital-based consultants. These general practitioners characteristically function in solo practice in offices or surgeries frequently situated in their homes. Over the years the Department of Health and Social Security has made an effort to develop group practice at health centers with incentives for general practitioners to relocate their practices in these community facilities.

These group practices and health centers also help to establish a link between primary care service and local health authorities or public health services as we know them. These latter incorporate maternal and child health care, health visitors (public health nurses with social work training), community nursing and midwifery, school health programs and other preventive and follow-up services. The Local Health Authorities (*Fig. 1*), as organized in 1948, are comparable to local public health services organized at the community, municipal or county level in our society. The variation in our communities is much more notable than that found in the National Health Service.

The reader familiar with the organization of health services in the United States, with its extraordinary diversity and flexibility, can find a number of deficiencies or concerns with the structure illustrated in Figure 1. Indeed, the Department of Health and Social Security identified a number of shortcomings. Foremost among the concerns were the difficulties in coordinating the three components of primary care, specialist and hospital services, and community health services. Accordingly, a study was undertaken in 1970 to determine organizational initiatives that would improve the provision of health services. This was a consumer-centered inquiry that began with a documentation of what the NHS called "main health care groups" and we in the contemporary American health care system would call "market segments." The purpose was to define priority in terms of the health needs of the

society. Seven population groups were given priority as indicated in Figure 2.

One would note that the listing began with physically and severely mentally handicapped children. The second category included severely or appreciably handicapped adults living in the community, some over the age of 65. The third category included the 7.5 million people in the population over 65 years of age.

a) There are over 100,000 physically handicapped children and 50,000 severaly mentally handicapped children.

b) There are over 1,100,000 severely or appreciably physically handicapped adults living in the community. Two-thirds (750,000 plus) are women and a similar proportion (725,000 plus) are over 65.

c) Of Britain's 7.5 million people aged over 65, over a third of a million are in hospitals or old people's homes. At least a quarter of a million require domiciliary care.

d) There are around 140,000 severely mentally handicapped people, over 40,000 of whom are in subnormality hospitals. So are 20,000 mildly retarded people.

e) Over half a million people in Britain are suffering from a diagnosed mental illness. At any one time about 125,000 are in hospital.

f) Of the roughly 6 million hospital inpatient attendances each year over two-thirds receive acute medical or surgical care. But by contrast, two-thirds of the hospital beds occupied at any one time are devoted to the care of the chronically ill, the elderly and the mentally ill or handicapped.

g) Britain's 25,000 general practitioners are consulted by patients about 4 times per average patient per year, that is about 30 times per doctor per day. This amounts to over 220,000,000 consultations in each year. Women consult their GPs roughly 50 percent more often than do men.

Figure 2. Main Health Care Groups in Britain as a Whole. Sources: Social Trends, Annual Abstract 1973, Handicapped and Impaired in Britain 1971, Health and Personal Social Service Statistics for England 1973, Her Majesty's Stationery Office, London.

One of the first decisions acknowledged that a population base of 55 million was too large for effective program planning and development of health services. Accordingly, a manageable scale of 250,000 people was selected as an appropriate population base. During fre-

quent contact and communication with colleagues in the United Kingdom over the past decade, I have been unable to ascertain the rationale for selection of a district of 250,000 population. I would note that this population provides the panels of 100 general practitioners. That appears rather modest when one stops to realize that the Southern California Kaiser Permanente Medical Group is a partnership of 1,700 physicians. Two hundred and fifty thousand people also require approximately 1,000 hospital beds, which could be readily represented by one tertiary care teaching hospital or secondary hospital and several feeder community hospitals.

The planners looked at the population at risk of 250,000 and noted that there were 60,000 children in an average district, of whom 500 would be physically handicapped and 200 severely mentally handicapped. Thirty-five thousand people would be aged over 65 years, and 4,500 of them would be appreciably physically or mentally handicapped. About 800 would be in a hospital, with a similar number in nursing homes and a further 1,000 requiring domiciliary care.

The reorganization of the National Health Service began in 1974 (*Fig. 3*) and represented a management restructuring on an almost unprecedented scale. Every executive post was declared vacant, and applications were solicited for appointment or reappointment.

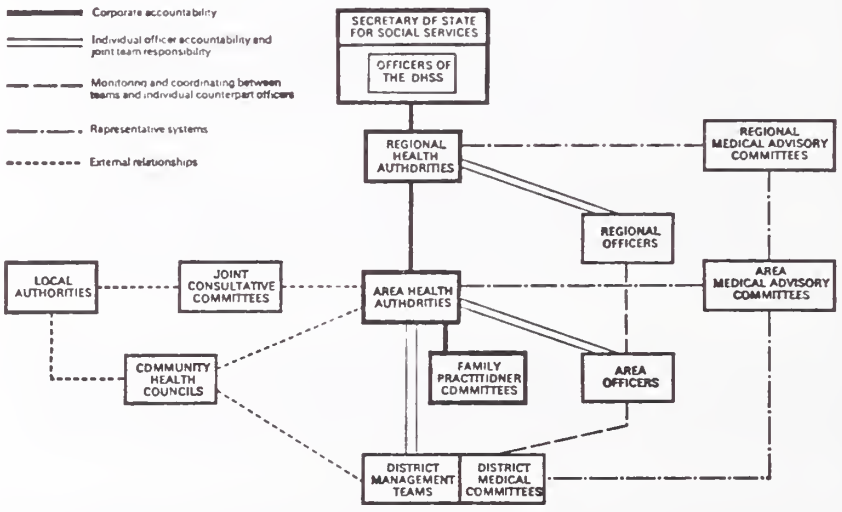

Figure 3. Regionalized National Health Service (England) 1974-1982. Source: "Management Arrangements for the Reorganized National Health Service." HMSO 1972, as presented in *The NHS Reorganization.* Office of Health Economics, London, 1974.

In every reorganization, one attempts to build on precedent. Such was the case with the National Health Service. Regional Hospital Boards, fifteen in number, became fifteen Regional Health Authorities. District Management Teams were organized to plan and implement the medical and health services for populations of approximately 250,000. These District Management Teams included district administrators, district nurses, district financial officers and district community physicians. These positions had counterparts at the Area and the Region.

Districts were at the front line for the delivery of care. Regions focused on allocation of resources and strategic planning. The Area Health Authority, some eighty-eight in number, was created to link with local authorities, comparable to county government in our society. This was deemed important, as medical and social services had to be coordinated effectively in order to provide health services for the elderly and the handicapped. Community Health Councils were created to evaluate performance of the Area Health Authorities and District Management Teams. This was precedent-breaking in many ways, as it introduced consumer hegemony over professional authority and challenged in many ways the reorganization of the British National Health Service *circa* 1948. To complete an explanation of the diagram, Joint Consultative Committees are a professional coordination between county government, local government and Area Health Authorities. Family Practitioners Committee continued the Executive Councils *concept* with interaction at the Area Health Authority level. Medical Advisory Committees at the District, Area and Regional level complete the organizational schema.

For a student of corporate organizational charts in the United States, this is not particularly intimidating. Actually, compared to the management structure of the Veterans Administration, it is not that complex at all. To physicians and other health professionals, however, it is mind boggling. One must note that the schema was developed by an American management consulting firm and could be construed as retaliation for the burning of the White House by the British during the War of 1812.

It didn't take long for the Department of Health and Social Security to find this organizational schema inordinately cumbersome. The shortcomings were demonstrated to me by a planner in one of the Regional Health Authorities. He showed me that it was virtually im-

possible to meet the required aims in a twelve-month planning cycle. One was barely through the cycle for Year 1 before one was already behind the process for Year 2. There appeared to be too many layers in the organization. But which layer(s) could be eliminated?

I encountered strong arguments for the essential requirements for Region, Area and District. The argument for fifteen Regions supervising 208 Districts, with some mergers of the latter, gained general acceptance, so a decision was made to merge the Districts with Areas, leading to the current organizational scheme, adopted in 1981. Comparing this with the original organization of 1948, the principal development has been the effort to coordinate all constituents of comprehensive health services at the local (District Health Authorities) level. (*Fig. 4*)

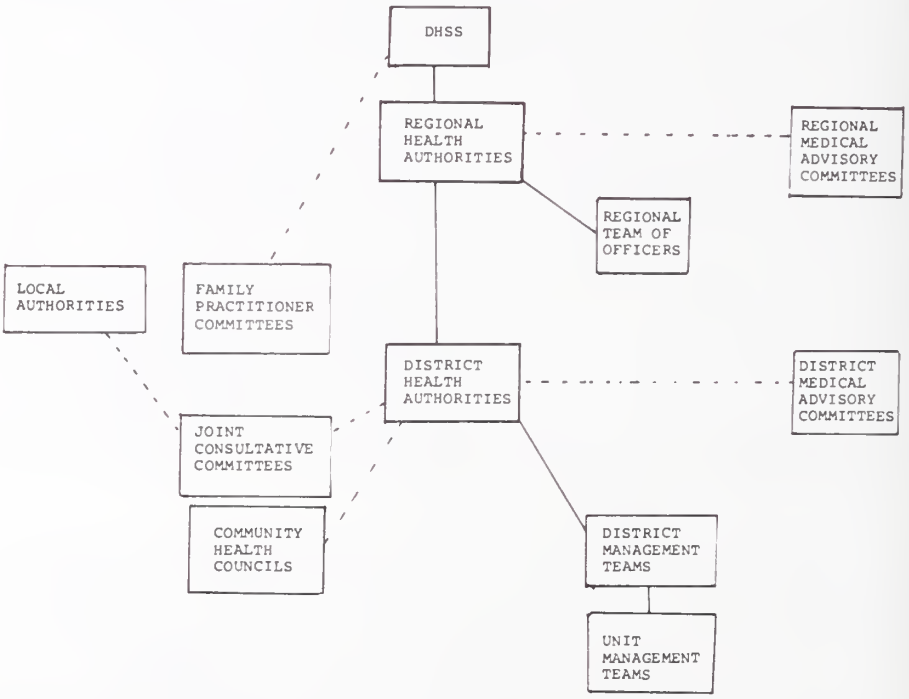

Figure 4. Organization of the National Health Service 1982-

Comments

The British National Health Service was enacted in 1946, the same year that the Hospital Survey and Construction Act (the Hill-Burton Program) was enacted by the United States Congress. Appropriations

to the National Institutes of Health signaled support for scientific research in the 1950s. While the British sought equity in health care for their society, we undertook to expand the development of hospitals and biomedical knowledge. The two societies have pursued different courses for the past four decades. In each the approach appears to have reflected the needs of the society. Neither system would work in the culture of the other. At the same time, there are lessons to be learned. The American health care enterprise can benefit from an understanding of our British colleagues.

One question, however, is what can we learn from their approach to improve ours? The American health care system is not perfect, and we can benefit from all the help we can get. Neither is the National Health Service, and so can they.

Guaranteed access to health care has apparently been achieved by the National Health Service, perhaps at the cost of rationing certain high-tech services. In contrast, we do not ration, but 37 million Americans do not have health care because of the lack of third-party insurance, Medicare, Medicaid, or an ability to pay. This is an issue of social priority to be addressed in the political arena. One may ask how our society would provide health care for all with 6.2 percent of Gross National Product. Cost is paid in waiting time for elective procedures in the U.K., but in that culture the predominance of the queue makes it politically acceptable.

In the United Kingdom every citizen can enroll on the panel of a general practitioner to whom he can turn on a regular basis for primary care. In contrast, the American culture is to have an internist for the father, an obstetrician/gynecologist for the mother, a pediatrician for the children, a family therapist for the nuclear family and a gerontologist for grandma. As I have contemplated this, I have often wondered who convenes the team meetings when it is appropriate to explore a problem common to several members of the family. For the British the general practitioner system works. Can we achieve the same continuity with the Health Maintenance Organization, another approach to managed care?

Conclusion

The characteristics of the NHS must be understood within the context of the economic, political, social and cultural institutions of the United Kingdom. Notwithstanding identical techno-scientific

characteristics, the differences in the other features of our societies would, in my opinion, require certain preconditions to replicate the National Health Service in the United States if this were desirable. Incongruous as they may appear, the following preconditions would have to apply:

(1) King Charles and Lady Diana reside in Washington at 1600 Pennsylvania Avenue.

(2) There are orderly queues at all SEPTA bus stops in Philadelphia.

(3) The Archbishop of Canterbury, the Right Reverend Jerry Falwell, leads prayer in state schools.

(4) Fast, frequent and regularly scheduled passenger trains connect all major cities.

(5) The Chancellor of the Exchequer, James Baker, defends the budget on the floor of the House (Representatives, not Commons).

(6) CBS and NBC eliminate commercials in exchange for government subsidy.

(7) Taxicabs queued at Philadelphia International Airport are clean and well maintained, and their drivers know every street, hotel and landmark in the City of Brotherly Love.

(8) At 4:00 P.M. daily most of the white collar and executive work force stop for tea and a discourse on politics, sports, religion and the arts.

Our society may yet realize values, goals and priorities for our health care enterprise, comparable to those in the United Kingdom, but undoubtedly by the American way — pluralistic and pragmatic, yet, we can hope, equally principled.

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The Health Care Systems of the Scandinavian Countries

BERNARD S. BLOOM

The countries of Scandinavia include Sweden with 8.4 million people, Denmark with 5 million, Norway with 4 million, and Iceland with less than 1 million people. These countries have similar cultures, heritage and language and at various times up to the early twentieth century were joined together, voluntarily or unwillingly, in differing combinations. Over the past millennium each has been a major actor on the world scene. All are high-income countries with well-educated populations enjoying among the highest levels of health in the world. Each country emphasizes strong social welfare commitments. For the purposes of this paper, it is fair to assume that the similarities of these countries, socially, culturally and politically, and of their medical care systems, are such that discussing one can also provide a fair understanding of the other three. I chose to concentrate on the Swedish medical care system for two reasons: first, it is the one on which the most data are available to us in the United States; and second, it is the Scandinavian country in which I have the most professional experience.

Background

By 1850 there were already in existence in Sweden a considerable number of private voluntary health insurance plans. Coverage grew rapidly in the late nineteenth and early twentieth centuries, so that by 1935 voluntary health insurance was available to all individuals between the ages of fifteen and fifty; coverage under a group meant that there was no age limitation. Government supervision of these private health insurance funds was established in 1910.

Even during these early years hospitals were financed primarily by general tax revenues, and the fees they charged (and paid for by the private health insurance plans) were nominal. Physicians were paid by fee-for-service according to a predetermined fee schedule. Additional benefits were provided for maternity leave and prescription pharmaceuticals. The entire voluntary system was financed mainly by premiums paid by employees; employers made no contributions while

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the central government paid for about 20 percent of the cost.

The Swedish medical care system as it exists today grew from this long history of private health insurance plans and was introduced in January 1955. At that time nearly three quarters of the population were already privately insured with about 1,000 sickness insurance funds in the voluntary system. All public and private aspects were incorporated into the newly organized system.

Provisions of the System

The basic goal of the health care systems in all the Scandinavian countries is to provide necessary health, medical, dental and social services, within a fixed annual budget, to the entire population to improve or maintain health. This is achieved by making available to everyone essentially all services of high quality with little or no out-of-pocket expenditure at the time the service is rendered. Every person in each country is covered by their national system. While the thrust of each system, as it is in all comparable western countries, is on therapeutic services, there is also extensive provision of preventive medicine, for example, maternal and child health, and for disability and its rehabilitation, short-term sickness benefits when people are out of work owing to illness and social services geared to the elderly and the handicapped. Issues of primary care, dental care, environmental hazards, occupational health and community health are also now being addressed vigorously with new services being organized and existing ones expanded.

The system provides all hospital, physician, nursing home and home medical care and often also provides, to a greater or lesser extent, a variety of what can be termed "social care." These include day care centers for the elderly, reconstruction of housing for the handicapped, home nursing, homemakers and the like. Additionally, old-age and disability pensions are under the jurisdiction of the national health system, bringing together health, medical and social security under a single sponsorship.

Organization

In each of these countries medical care is a system that provides *services* and is not a health insurance program that pays or reimburses after medical services are provided. In most countries with highly organized health care or health insurance systems it is the responsi-

bility of central government, but in Sweden medical care is primarily the responsibility of the twenty-six individual counties within the country. Contrarily, education, which is a local responsibility in most countries, is the responsibility of the central government in Sweden.

The national government has overall authority and responsibility for health affairs through the Ministry of Health and Social Affairs. It is primarily responsible for broad national health policy. The National Board of Health and Welfare is the principal organization within the Ministry responsible for broadly supervising and promoting health and medical care services throughout the country. Implementation of national policies and decision making affecting the local area are the responsibility of the individual counties. The National Board of Health and Welfare is also responsible for education and training of all medical personnel, the location and construction of hospitals and health and medical care research.

Every county is responsible for nearly all health care resources within its geographic boundaries. There is also an emphasis on having a population large enough within a given county to provide the full range of care from primary to tertiary. This holds true for large but sparsely populated counties such as Norrbotten or for more heavily populated counties such as Stockholm. There is easy access for care across county boundaries, especially if one county has specialized services not available in another. For example, the medical school at Umea and its teaching hospital are responsible for serving the health and medical care needs of the sparsely populated northern third of the country, a region with insufficient population to support its own tertiary care complex.

Physicians, nurses and other health services providers are paid directly or indirectly by the counties in which they work. The elected County Councils are responsible for all governance, including fiscal authority, of the medical care system, just as they are for all other political aspects of county government. County Councils are elected for a period of three years at the same time as other general and municipal elections. Their size varies from about 25 to 150 members, based to a large extent on the size of the population in their county.

Variations exist between counties in the range and type of services available, per service costs and the amount of taxes raised to pay for medical care. (Approximately 60 percent of the County Council budget goes for medical care services.) There is also a great deal of local

leeway in deciding the services to be offered within a county. Above a minimum level required by broad National Health and Welfare Board policy, individual counties can usually decide specific services they wish to provide, especially new services. For example, if a hospital or a physician in a county wants to provide a new service such as cardiac catheterization or digital subtraction angiography, the County Council must be convinced to make the money, manpower and facilities available. Of course, the County Council will also evaluate other health care requests such as for family planning services, care for the elderly, maternal and child health programs and the like, and will decide priorities for limited funds. At the same time, if the County Council decides it wants any or all of the new services, it can raise taxes or reduce other services to fund the new ones. Needless to say, increasing taxes in Sweden is fraught with the same political problems as occur elsewhere.

Physician Organization

Physicians and all other health care workers are, with few exceptions, employees of the county; they are hired and paid by the county. Salary scales and working conditions, however, are determined nationally by collective bargaining, usually between government and appropriate labor unions or professional associations. As in all western countries, the physician is an independent practitioner and makes decisions based on medical and other criteria without interference from government in the individual instance. Nearly all physicians in Sweden, irrespective of the level of care they provide, are hospital-based and specialty-trained.

Physician services are organized around individual hospital departments and clinics, much as in the U.S., and are physically located within the hospital. Nearly all persons, irrespective of income, use this system. Only during the past few years has Sweden begun to develop an organized freestanding community-based system in addition to the rural ambulatory care clinics, using generalist physicians to provide a broad spectrum of adult and pediatric care directly to patients.

While physicians are allowed to practice fee-for-service, their ability to do so is severely circumscribed and the income they make from it is heavily taxed. Not surprisingly, few physicians do any private practice. Whether a large unmet demand for private care and private practitioners exists is hard to know. However, because there is such

an extensive, complete and highly organized system, and a large number of physicians per population, approximating that of the U.S., access to a physician of choice within one's local area is generally no different than it is in the United States.

Financing

Health and medical care services in Sweden are financed by compulsory contributions dedicated to medical care. Payments are made by all employees and employers at the same time as their general income tax obligations. These compulsory contributions cover only about 10 to 15 percent of the total county medical care budget. The major share comes from general city, county and other community tax revenues raised by income taxes, property taxes and the like. The remaining small amount comes from cost sharing such items as pharmaceuticals, eyeglasses and the like.

All health-related institutions, hospitals, nursing homes, day care centers for the elderly, and so forth, are financed by annual budgets provided by the county. As with most public budgets, those of health institutions are primarily historically based; there is usually a small increase based on inflation and other factors added to the previous year's budget. Lastly, every patient pays the equivalent of $1.00 to $2.00 at the time of service for each ambulatory visit to a physician.

Comparative Figures

The objective of any medical care system is to have a positive influence on the health of its population. If we review data from three

Table 1
Resources Available for Medical Care

	United States	United Kingdom	Sweden
Population (millions)	240	55	8.4
Birth Rates/1000 Population	15.9	14.9	13
Health Care Expenditures as % of GNP	10.8	6.2	9.5
Hospital Beds/1000 Population (acute)	4.3	2.5	5.8
Physicians/100,000 Population	210	140	210

comparable western countries with different medical care systems, we soon realize that similarities outweigh existing differences.

Table 1 shows that the U.S. has nearly five times the population of the United Kingdom and thirty times that of Sweden; there are fewer people in Sweden than in metropolitan London or New York City. The birth rate of each country is low. The U.S. continues to spend ever-increasing amounts of resources on medical care — 10.8 percent of GNP in 1985 and 11.2 percent estimated for 1986. The amount spent in the United Kingdom has been stable for some years at about 6 percent, while Sweden has actually reduced the percentage of gross national product going to medical care from nearly 11 percent in the late 1970s to 9.5 percent in 1985.

Sweden has twice as many acute care hospital beds per 1,000 people as the United Kingdom and one third more than the U.S. All three countries, though, are trying to reduce their bed supply. The U.S. and Sweden have approximately the same number of physicians per 100,000 population. The United Kingdom, on the other hand, has about one-third fewer physicians for its population.

Table 2
Measures of Medical Care Use

	United States	United Kingdom	Sweden
Life Expectancy	76.3	77.7	79.0
Death Rates/1000 Population	8.5	8.0	7.0
Infant Mortality/1000 Live Births	8.5	8.0	6.9
Hospital Discharges/1000 Population	170	120	150
Operation Rates/1000 Population	80	60	65
Average Length of Stay (days)	7	9	10
% of Population Visiting a Physician at Least Once During a Year	75	75	75
Physicians Visits/Person/Year	5.5	5	5

How do these input measures relate to population health? Most researchers acknowledge that medical care has little to do with population life or death statistics. Table 2 presents some of the statistics

on resource use and outcome. For example, life expectancy in Sweden is the second highest in the world, next to that of Japan, while the U.S. has one of the lowest life expectancies of western countries. However, the differences in life expectancy at birth for the countries shown is less than three years. Death rates also vary, being about 18 percent higher in the U.S. than in Sweden. These differences result in large measure from relatively high motor vehicle accident rates, homicides and suicides. Comparable differences exist for infant mortality. Here, too, the reasons for these differences are primarily social. None of these statistics are likely to be greatly influenced by medical care.

The rate of medical care resource use varies considerably between these countries. Certainly in the U.S. we make the greatest use of medical care, particularly hospital-based care, of the three countries. The U.S. has about 12 percent more hospital discharges per population than Sweden and about 30 percent more than the United Kingdom. Operation rates show a similar pattern, with the U.S. having 19 percent more than Sweden and 25 percent more than the United Kingdom. However, once a person is hospitalized in the U.S., he or she is in hospital substantially fewer days than in either of the other two countries; in fact, 30 percent less than in Sweden. The same portion of the population (75 percent) in each country seeks physician care at least once during the year, and the average person visits the physician about five times annually.

Unique Aspects

More so than in any other western democratic country the guiding principle of the Swedish medical care system is that of the rationalization of care and services to meet defined population need. Rational planning is stressed, regionalization of services is emphasized and the needs of the population are considered paramount. Disagreements regarding budgets, programs, services and the like are resolved quietly and usually without a great deal of input from the public; the County Council makes the decisions within National Health and Welfare Board guidelines after listening to all interested parties and weighing all pertinent information.

Conclusion

The variation in resource availability and use, here defined by hospitals and beds/1000, physicians/100,000, hospital discharges and op-

erations/1000, appears unrelated to the health in three similar high income western nations. Although there is some variation in life expectancies, population death rates and infant mortality, the differences are not great. And the underlying cause of these differences is most likely attributable to social and economic reasons rather than to the medical care system of each country.

I am convinced that most people reading this article would feel comfortable receiving medical care in Sweden. The quality is probably at least as good as in the United States. There are fewer regulations, public discussions and concerns regarding the quality of medical care; there is certainly substantially less litigation. Physicians are trained much as they are in the U.S., using many of the same texts, techniques and equipment as are used by U.S. practitioners. Hospitals look the same and physicians practice similarly to their U.S. counterparts. Sweden mirrors the U.S. in that it makes all medical care available, emphasizing, at least until recently, hospital-based care. This is unlike the United Kingdom, where the emphasis is on ready access to primary care.

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Medicine, Theirs and Ours — Canada

SIDNEY S. LEE

No two systems of health care and finance are alike. Each country develops its own to suit its own notions of equity, responsibility and expense. The health programs of Britain, China and Sweden that have been discussed in previous sessions in this series are really quite "foreign" to most thought in this country. In each case the system in place fits the needs of the country as perceived by its government or its people. For example, the quite rigid separation of function as between generalist and specialist in Britain is quite different from our own high degree of interchangeability. Government in Britain owns almost all the hospitals, having acquired them from the previous owners at the start of the National Health Service when they were largely either worn out or bombed out.

China, faced with mammoth shortages of trained manpower, is building its new system from the ground up, with barefoot doctors as the first point of contact, especially in rural areas. Sweden is largely decentralized as to its tax base for health services, with the county as the base. However, it controls manpower centrally.

I have been assigned the job of telling you a bit about differences between the United States and Canada. At one level it's an easy task and at another level terribly difficult, because one should understand the context as well as the substance of the matter. And I must state, as I have reminded a whole generation of students and other audiences, that my observations are biased by my own preconceptions and experience, and my opinions deserve debate rather than passive acceptance.

Comparisons

Looking at the United States and Canada, one perceives significant similarities as well as substantial differences. Here are two countries, among the largest physically in the world. Each still views itself as somewhat of a frontier society. Canada is larger in land mass, but its population is about equivalent to that of California. Both are immi-

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grant societies with much population growth owing to immigration from all over the world.

Both societies have, over time, seen substantial internal conflict: in Canada between the French and English as the predominant groups, and in the U.S. between North and South and between black and white populations.

The U.S. broke away from English domination, declared independence in 1776, fought a bloody war and wrote its own Constitution. Canada relinquished colonial rule in 1875 and became progressively independent from England in a relatively civilized fashion over time. After fifty years of internal squabbling, Canada finally achieved a new Constitution in 1982, supplementing and replacing the British North America Act, the last vestige of colonialism.

While states' rights have been an issue in many political campaigns in the U.S., there is pretty solid acceptance today of federal legislation and federal policy-setting as a vital part of American life. In contrast, Canada is a federation of provinces, with predominant powers in many spheres held by the individual provinces and much frustration of federal initiatives through coalitions of provinces.

Each country has a democratic form of government. In the U.S. the presidential system provides for a balancing of power between the executive and legislative branches, with a judicial branch maintaining the Constitution as a guiding force for the country as a whole.

In the U.S. system, each legislative proposal attracts varying coalitions of adherents and opponents; party discipline is generally weak. The President may propose, but it is indeed Congress that disposes, and the congressional process is complex and repetitive. Conference committees between the House and the Senate emerge with compromises after the initial enactment of legislation by each. Then separate legislation is introduced to provide for the funding of programs and must again be subject to compromise after initial enactment. It is easy to make bold promises and terribly difficult to gain adoption and funding.

In contrast, in Canada's parliamentary system at both federal and provincial levels, the executive powers are held by the elected members of the Parliament. Cabinet members are appointed by the leader of the party in power from among his legislative colleagues. There is thus no separation of powers. Once a policy is decided by the party in power, it will be enacted, and the government may then proceed

to implement it; the budget is the government's budget so long as it is in power. Of course, governments may be formed by coalitions and may be dismissed on the loss of a vote of confidence or a major policy vote.

There are obvious advantages and disadvantages to each of these systems of government. In the U.S. it is almost always a compromise that wins out. In Canada it is the government's program that wins. But in both of these forms of democratic government, the name of the game is the same — for every politician the watchword is "get re-elected." In the U.S. system, unfortunately, that may require more consideration of the views of special-interest groups than in the Canadian system, where adherence to party discipline is of greater importance.

Equity

Another major area of difference between these two countries is less accessible to formal analysis but very evident to anyone who has lived in both countries: that is the matter of perception of equity. Both countries express views about helping the poor, the handicapped, the aged or others defined as less well off or less well able to help themselves. In the U.S., however, that is the historical cornerstone of health policy. Since the early days of the republic, the U.S. has identified defined segments of the population through special legislation offering direct medical care, or alternatively, payment for medical care. We started with merchant seamen in 1796 as a nation of a few states along the Atlantic seaboard heavily dependent on merchant shipping. The seamen were away from home almost all the time and were exposed to considerable hazard of both disease and injury; that is how the U.S. Public Health Service began. Over the years since 1796 the U.S. has added dozens of classes of beneficiaries: veterans, the blind, families of dependent children, the disabled, the aged, and people with chronic kidney disease, to name but a few.

Canada did some of the same for a time, but beginning in 1947 in Saskatchewan, and then across Canada, offered hospital and diagnostic services to all, and subsequently medical care services to all. This was accomplished through two major pieces of federal legislation that provided powerful incentives to the provinces to adopt the program. By 1971, to all intents and purposes, all Canadian residents were entitled to tax-based services equivalent to the broadest coverage you can buy in the United States.

The health policies of these two nations display two very different notions of equity, different forms of social contract between government and the governed. On the one hand, in the U.S. we raise the downtrodden by offering services or dollars to buy services. On the other hand, in Canada, government says that health care is a right for everyone and finances it largely out of a highly progressive income tax: equity in Canada is for everyone, but those who earn more pay more in taxes. In the U.S., there remains a population larger than all of Canada with no coverage from any source — those who are ineligible for Medicare, Medicaid, Blue Cross or commercial insurance. They appear as bad debts or unpaid bills in the nation's hospitals and doctors' offices — or they do without.

Health policy, or human rights in health, as I view it, is a form of social contract between governments and the governed. Its terms are not always as explicit as those that appear in a contract to purchase or sell goods or services. In addition to reading the lines, one must read between the lines; what is excluded may be as significant as what is included. One must, as the noted economist Carl Stevens has suggested, be aware of who benefits, what are the benefits, who administers and who pays for such a contract. Here again, one sees great differences between the U.S. and Canada.

Benefits

Who benefits in the American system? The beneficiary classes in the U.S. are well defined in terms of age, social class, previous military service, disease conditions, employment status, economic status, place of residence, family structure, disabilities, and so forth. By so defining beneficiaries, one leaves a residue of nonbeneficiaries and, of course, the range of benefits from class to class of beneficiaries varies substantially. Not everyone is entitled to, and not everyone gets, the same benefits. American health policy requires millions and millions of decisions at various points in time, some at each point of service. To take a single example, the automobile plant worker who is entitled to some of the broadest benefits in American society as part of his union's contract with the auto manufacturer loses his coverage when he loses his job. Unemployment compensation plus a union contribution may permit him to continue to carry some of his insurance cost at a reduced benefit level, and then if his assets are low enough and his unemployment coverage runs out, he may apply for a determination of eligibility

for Medicaid under the Medicaid eligibility rules of his state of residence. Alternatively, if he is a veteran who is certified as disabled or declares poverty, he has access to care at a Veterans Administration facility if he requires hospitalization, but probably not if he requires only out-of-hospital care. Of course, care for a veteran is only for him, not for his family. Normally, if he goes back to work he is eligible for reinstatement of his former benefits, perhaps with a waiting period for some of them. At each step along the line, there are new eligibility requirements — new interviews, new forms to fill out, and time for processing.

Who benefits in Canada? Essentially everyone who has been a legal resident of the country for ninety days, and that is the only condition that must be satisfied. There are no restrictions as regards such categories as age, social class, military service, disease conditions, employment status, economic status, place of residence, family structure and disabilities. Everyone is covered from conception to death.

What are the benefits in the U.S.? Each American has his own benefit package or none at all. The benefits available may depend on who his employer is, because most American benefits are tied to employment. Eighty-five percent of all Americans have some form of benefit for hospitalization, a lower percentage have surgical coverage, and relatively few have coverage for out-of-hospital services. The largest numbers with out-of-hospital coverage are beneficiaries of governmental programs, such as Medicare for the aged, Medicaid for the poor, and some veterans. In addition, members of Health Maintenance Organizations and those with broad-coverage insurance policies have ambulatory care benefits. Many Americans try to plug the holes in their basic range of benefits by purchasing multiple forms of insurance, and duplicating and overlapping benefits are not at all uncommon, especially where there are two wage earners in the same household. Many services are not covered at all; others are covered only in part. There are almost always limitations in duration of coverage as well as in the modalities of care that are covered.

For Canadians the basic benefits are quite broad indeed: hospitalization and diagnostic services and medical care in office, at home and in hospital, benefits that are portable across Canada. What are called basic benefits in Canada are roughly equivalent to benefits under a Blue Cross/Blue Shield major medical policy, or membership in the Kaiser plan or an equivalent Health Maintenance Organization (HMO) in the U.S.

Administration

Who administers these benefits in the U.S.? A remarkable panoply of insurance companies, both commercial (tax-paying) and nonprofit (non-tax-paying); a multitude of governmental agencies, federal, state and local; hundreds of Health Maintenance Organizations of various types, each of which has its own rules and its own contractual arrangements; and the Blue Cross and Blue Shield plans. Typical insurers write hundreds of different kinds of contracts. Some government programs are subcontracted to commercial carriers or the Blues for administration; others are directly administered by individual agencies of government or combinations of governmental agencies. For example, it is possible to be on Medicare for the aged, administered by Blue Cross under contract to the federal government; on Medicaid, which is state administered or delegated by the state to local administration; and, be eligible for veterans' benefits simultaneously. Each has its own administrative structure and eligibility requirements.

Here again, the Canadian system is vastly simpler. Ten provincial governments and two territories are each responsible for the administration of a health plan. All plans are publicly administered, either directly by provincial government or by a public agency established by provincial government. There are no fiscal intermediaries. If more than one provincial agency is responsible, such as in Quebec where hospital benefits and medical care are separately administered, the bookkeeping between agencies is carried on at the provincial level, but the beneficiary is not involved and is generally unaware of the process. He or she merely presents identification and receives the service. In Quebec, for example, every individual—some six and one-half million residents—has a plastic credit card that is presented at each encounter with a provider in the system. *You really have a human right when you have a plastic card to get your benefits.* Standard forms are used throughout, facilitating payment and the compilation of statistics.

Cost

Who pays for all this in the U.S.? For the employed it is usually a combination of employer-employee payments to an insurance carrier or an HMO. Some governmental programs such as Medicare or benefits for end-stage kidney disease are financed through the Social Security system. Medicaid is financed through general tax revenues at the

federal level and combinations of state, county and local funds. Most hospitals are voluntary, some are proprietary and others are directly operated by various governmental agencies at each level of government. Some receive funds from all potential sources in the system, others from a principal single tax-based source. For most Americans there is some out-of-pocket payment in addition to insurance premiums and the payment of taxes. Several thousand third parties are involved in transferring dollars from the individual recipient of service to the individual providers of service. Each of these, in turn, attempts to limit or control its particular costs of purchasing the services provided. The insurers want to keep *their* costs down so that they can sell their policies in the marketplace. Governmental agencies want to keep *their* costs under control to avoid accusations of waste and extravagance. But there is no single place in the U.S. system where the aggregate expenditure is susceptible to control. Hundreds of piecemeal legislative and regulatory provisions have been adopted in efforts to effectuate control of a segment of expenditure. These are, in turn, administered by thousands of agencies and hundreds of thousands of people charged with controlling entry, standards of care, capital investment as well as payment for individual services. If one had deliberately set out to produce as complex and costly an administrative system as possible, the U.S. system represents an excellent model.

Who pays in Canada? Provincial governments are not only the administrators but the paymasters as well. Both federal and provincial taxes are used for this purpose. Moderately complex formulas are involved for the allocation of federal dollars to the provinces, but there is no federal interference in provincial administration. The buck stops at the door of provincial government. It may increase benefits as it chooses but may not remove basic benefits. It may choose any mix of tax revenues to pay for the benefits. Some provinces use more progressive mixes of taxation than others. But provincial government is the payer, and each province accepts that responsibility under its own legislation. Almost all provinces have some mix of out-of-pocket payments by beneficiaries as well. Some provinces permitted providers to bill additional amounts over the standard fees. This was ruled out by federal legislation supported by all parties and occasioned a brief doctors' strike in Ontario. Most provinces require payment for some services such as private rooms and ambulance transportation. It is possible to buy insurance to cover these out-of-pocket costs.

A word about costs. For many years I have heard rhetoric in the U.S. about how this nation can't afford health insurance for all. If we had Canada's system here we would have 30 billion dollars available from administrative cost savings to finance the care of those who have *no* coverage in the U.S. Most of the difference is accounted for by the lower cost of administering the Canadian system. Most of the excess U.S. cost is used to pay for determination of eligibility, for selling costs and commissions to insurance agents, for multiple and complex filling out of forms for reimbursement, for maintaining large and complicated billing systems, for carrying charges on accounts receivable, for multiple bureaucracies both governmental and commercial, for duplicating hospital systems, and so forth. Each year the U.S. system chews up a larger piece of the gross national product; this year it will be about 11 percent of all goods and services produced. In Canada health services hovered between 6.9 percent and 7.1 percent of gross national product for about a decade, and more recently they have risen slowly to 8.2 percent.

All of this is not to suggest that Canada has achieved an ideal health system. It's just damn good. It has its problems, but none of them are beyond resolution. It is subject to the same inflationary forces as obtain in the U.S.; many of the goods used are indeed purchased in the U.S. or from U.S. corporations operating in Canada. There is the same push of the technological imperative in Canadian medicine as in the U.S. Canadian medical education is essentially identical to that of the U.S. and is accredited by the same bodies.

But in addition to simpler, less costly administration of health benefits, Canada benefits from a more socially conscious medical profession. The wide acceptance of fixed fee schedules facilitates administration and reduces the costs of that administration. Yes, the profession fights with government for more money in every province, and that is understandable and part of the rules of the game. There's much less disparity of income within the profession than in the U.S., and this, too, is widely, although not universally, accepted. Most Canadian doctors could not morally accept the U.S. system. Those who do may migrate to the U.S., and some come back after seeing the complexity of practice administration and the cost of professional liability insurance.

Canadian hospitals, too, are much easier to administer; they operate for the most part on prospective budgets set in negotiation with

provincial governments. They scream for more money, of course, but they are very happy to see the regular bank checks that pay from 95 to 100 percent of their operating costs.

In implementing health policy, both the U.S. and some Canadian provinces have attempted different models for the delivery of health services, mostly on a small scale and in response to somewhat different perceptions. For example, in the U.S., efforts to respond to the needs of the poor led to neighborhood and rural health centers, funded by the federal government but locally administered. The health center movement in Canada has had less targeted motives. In the province of Quebec about one hundred exist, more oriented to the breadth of response by government to broadly defined need for access to social services than to health services. Thus far, these have been inadequately evaluated as to effectiveness.

In the U.S. incentives have recently been provided for the formation and operation of Health Maintenance Organizations, both prepaid group practices and independent practitioner plans. In Canada prepaid group practices are discouraged by the predominant fee-for-service orientation of the provincial health insurance plans.

Fee-for-service is still, in both countries, the prevailing mode of payment of physicians. For most Americans and for most Canadians, this means that there is a powerful force, however moderated, toward providing more services and especially those that are most remunerative to the physician; the more one does, the more one gets. The specialist who controls the use of a technology is thereby a major beneficiary in both systems. To the extent that there is application of such technologies in an excessive fashion, and there appears to be evidence that this is the case, both systems bear substantial cost burdens that do not benefit the patient.

Summary

So here we have two different health systems reflecting very different health policies, different perceptions of human rights, two different social contracts between governments and the governed on a single continent. As social contracts they reflect different social philosophies, different perceptions of priorities, different cultures and different forms of government. There are advantages and disadvantages to each. There are lessons that each might learn from the other. For me, it has been an extraordinary experience to have had the opportunity to work with both.

I often wonder to what extent the U.S. government reflects the will of the people as regards health policy. Don't Americans want what Canadians have—a social contract that assures everyone that an illness will not lead to bankruptcy, that financial access is available to all, that the health system should respond to the needs of all? Do we Americans not want this for everyone? Must we argue about the virtues of competition or the apparent alternative of petty regulatory process designed to exclude rather than include people? Do we really need to spend 30 billion dollars a year in excess administrative costs while denying benefits to 35 million people? I would argue that present levels of national expenditure in the U.S., differently arranged, would permit us to provide for all.

Canada's program provides continued equity for the people. This is a cornerstone of the Canadian initiative, a social contract that we in the United States would do well to study, understand and perhaps even emulate.

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Medical Standards in a Decentralized Health Care System

CLARK C. HAVIGHURST

I will discuss medical standards partly in the context of medical malpractice law but mostly in a larger policy context. The question I want to examine is whether it still makes sense, in theory or in practice, to judge medical care, and to provide it, according to a single set of ideal professional norms and standards. My thesis is that creeping pluralism is rapidly eroding the long-prevalent view that the medical profession is charged with collectively defining standards by which the health care system should be governed and with ensuring that all patients receive care meeting those standards.

Let us look first at historical developments over the last two decades and especially at some recent developments that signify basic changes in how we think about medical care. I will argue that we are in the midst of a revolution that has already caused us to view professional standards more skeptically than ever before and also to look for guidance elsewhere than to the medical community. It is no longer appropriate, I submit, to think of medical standards that are generated formally and informally by the profession itself as the sole source of prescriptions for governing the system. Although professional standards are still a vital guide to practitioners and others, different signals and influences are also affecting the care that patients receive.

The trend that I see taking us away from the old monolithic model of the medical care enterprise seems to me to be generally desirable. But the breakdown in the medical profession's authority and the concomitant decentralization of decision making on crucial issues create some major challenges for the medical profession, for the legal system, and for public and private purchasers of health care. What I want to do is to show how changes in the way society regards medical care are changing the role of medical standards.

The Old Paradigm—Professional Control

Let me start by sketching what I see as the old paradigm of the health care system. Interestingly, it was an ideal that was shared by

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professionals and nonprofessionals alike. Indeed, as Paul Starr's book, *The Social Transformation of American Medicine,* impressively shows, it was embraced by society as a whole, being reflected in legislation and the common law and in the operation of private institutions, such as hospitals and insurance companies. This model, as I see it, is in the process of breaking down and of being replaced by a new one. The noted historian of science, Thomas Kuhn, in his well-known history of scientific revolutions, suggests that the process of replacing one scientific paradigm with another is not likely to be smooth. One of Kuhn's main points is that scientific establishments are often slow to recognize the invalidity or inadequacy of conventional beliefs. It would be surprising if medical professionals were any different from earlier scientific elites in their tendency to cling to old views. In the case of modern medicine, however, economic forces are driving some of the new lessons home, with the result that the likelihood of change and the pace of it are being increased.

I am not a historian, but I would like to suggest that the era we are passing through in health care has some important lessons about how society changes its perceptions and accommodates to new ways of thinking. Certainly the law, which fully embraced the old paradigm, now faces the necessity for adapting itself to changes that are being forced on the health care industry by developments in the economic marketplace. It is worth observing that we are looking here not only at an economic marketplace but also at a marketplace of competing ideas, in which value issues as well as scientific questions are being debated and resolved. How we think about medical standards is a central issue in these debates and in this revolution.

The old paradigm of the health care enterprise is captured most succinctly in the notion of a health care *system.* We still use that unitary term today even though it is clear that we are looking at an increasingly diverse and competitive *industry.* Fifteen years ago, when the old paradigm was still intact, it was common to hear the organization of health care criticized for being a "nonsystem." The implication was that the way to make progress was to tighten central control, raise professional standards, and better enforce compliance with them. Although physicians resisted the imposition of strong central controls over their own practices, they fully embraced the idea of professional control at many crucial points in the system and at least represented that their day-to-day practices were governed by professional stan-

dards. Overall, the conventional view, both among reformers and within the medical establishment itself, was that of a monolithic system producing a single standardized product that all citizens were entitled to receive. When people declared (as they frequently did) that "health care is a right," they implied that there was a scientifically defined or definable commodity that should be equitably available to all. The implication was that standards existed, or could be established, to define what was both a sufficiency for, and an entitlement of, all citizens.

The original idea, the emergence of which is documented by Paul Starr, was that *professional interests could be relied on to control this unitary system in all of its essential aspects.* Under this view, which prevailed into the 1970s, society was content to look exclusively to individual physicians and to organized medicine and the organizations it sponsored for definitive judgments on a wide range of issues, many of which were not purely technical but had important nontechnical aspects that might be viewed differently by different people. Under the professional conception that dominated thinking during that era, each individual physician's treatment decisions were deemed to be presumptively valid, though always theoretically open to appraisal under the profession's own standards.

The old paradigm allowed the profession as a whole to assume responsibility not only for defining and administering standards of medical practice but also for decisions on a wide variety of other important matters. One of the many crucial subjects on which professional authority and standards were accepted was the issue of how doctors should be trained. The AMA-AAMC Liaison Committee on Medical Education officially set standards for and accredited medical schools, ensuring that U.S.-trained doctors would all be trained in accordance with the paradigm — as sophisticated medical scientists equipped to practice high-tech medicine in the hospital setting. The Educational Council for Foreign Medical Graduates set standards for determining which foreign-trained doctors were good enough to treat American patients. The large number of FMGs that were needed in the U.S. in the sixties and seventies revealed that the profession's control over American medical education had seriously restricted the supply of physicians and, specifically, had prevented the training in U.S. schools of practitioners who, while they did not fit the paradigm's ideal of the medical scientist, were badly needed to treat patients nevertheless.

The medical profession also set definitive standards governing other elements of the monolithic system. Through the American Board of Medical Specialties and its member specialty boards, the profession authoritatively delineated medical specialties and decided who was qualified to hold himself out as a competent specialist. Through the Joint Commission on the Accreditation of Hospitals, physician organizations set standards for how hospitals should be organized and operated, paying special attention to how hospitals should relate to doctors. (It is only lately that the JCAH has begun to look at the actual outcomes of patient care in judging hospital quality and not primarily at whether hospitals are organized to give doctors the autonomy they want.) The AMA also participated actively in defining the scope of practice and the training of nonphysician personnel, primarily with a view to ensuring that these personnel would fit easily into niches the profession had designed to suit its overall vision of how medical care ought to be provided.

Under the old paradigm, organized providers also exerted extensive authority over health care financing. The Blues were originally controlled by provider organizations. As a consequence of this sponsorship, they were operated in accordance with the notion that physician judgments should be constrained as little as possible. The AMA at an early date set standards by which private insurers were expected to abide. Ethical rules against contract practice (essentially standards governing the economic and organizational arrangements under which medical care should be delivered) discouraged experimentation with new models, especially prepaid group practice.

During the long era when the old paradigm prevailed, its implicit assumption that medical treatment decisions were exclusively scientific and reviewable only under professional norms was generally embraced by insurers and other purchasers of health services. Private insurers, for example, uniformly undertook under their policies to pay for all "medically necessary" care. In effect, this contractual commitment by the insurer meant that the profession's own standards would govern which services would be provided without appreciable cost constraint. Whenever a dispute arose over a fee or a medical necessity, insurers turned to profession-sponsored peer review bodies to resolve the issue, thus inviting physicians to impose, under the name of professional standards, inflated valuations of their own services. The federal government itself, in the PSRO program, explicitly delegated to profes-

sional bodies the task of defining the scope of its payment obligations under Medicare. Although many physicians found the PSRO program offensive, it went rather far toward embodying the profession's own view that only professionals accountable to other professionals could be trusted to set standards.

During the long period when the old paradigm prevailed and made resources freely available to physicians, the cultural values of the medical profession came to define the question of medical care solely in terms of patient need. The only issues were (a) what was technically feasible and (b) what a physician consensus deemed beneficial for patients. Professional standards were deemed a reliable guide to medical practice on three assumptions: first, that patients were unable to decide significant questions for themselves, except at the last minute, when as a belated, myth-preserving concession to the ideal of patient autonomy, their "informed consent" had to be obtained; second, that medicine was a science capable of objectively defining the diagnostic and therapeutic steps appropriate in every case; and third, that, even if every individual practitioner might not always be, the profession as a whole was guided solely in its judgments by scientific principles and technical considerations and could therefore generally be trusted to use society's resources wisely. On these assumptions, cost considerations and patient willingness to pay were systematically excluded as influences affecting the system's performance.

The paradigm's view of medical standards was well summed up in the customary practice rule in the law of medical malpractice. Adherence to medical custom was an almost complete defense for any physician charged with professional negligence, and deviation from professional consensus was presumptively negligent, if not negligence per se. The law thus strongly reinforced the belief that professional standards were an entirely reliable prescription for medical practice. Indeed, the law rigorously enforced adherence to medical custom and discouraged even responsible economizing and experimentation.

Flirtations with Government Control—Still Working Within the Old Paradigm

As we all know, the cost question proved to be the Achilles heel of the old paradigm. Essentially, the medical profession had arranged things so that costs were not regularly counted. As a result, costs rose at a disturbing rate without evidence of commensurate benefit. Cost

concerns were prompted precisely because no one could have confidence that market mechanisms were performing their usual function of resolving trade-offs between costs and benefits. Precisely because there was no basis for assuming that more spending reflected informed consumer decisions to invest more resources in beneficial health care, the public refused to applaud health care as just another "growth industry."

The first impulse among policymakers faced with rising health care costs was to revise the paradigm slightly by shifting some crucial decision-making powers to government. However, the central premise of the old paradigm — that central control was desirable and indeed inevitable — still went unquestioned. Instead, the challenge was seen as one of bringing government in at a few strategic points in order to curb the monolithic system's ability to resolve all doubts in favor of more spending. The health planning and certificate-of-need (CON) initiative had the potential for limiting the facilities that providers would have available to work with and thus for limiting the costs they could incur. It foundered, however, on the problem of defining "need," a concept that the legislation borrowed directly from the old paradigm. The presumption in favor of prevailing practice was so strong that the best that CON regulators could hope to accomplish was to prevent the creation of unused capacity and outright duplication of services. (Even that objective proved difficult to achieve as the planning and regulatory process became heavily politicized and the planners and regulators found it hard to contest, on the ground of cost, providers' assertions of need.)

Another of government's cost-containment initiatives, the PSRO program, contained some mechanisms for revising local practice standards, but it still viewed the industry as a single entity (or system) and the problem as one of changing medical practice across the board. Hospital rate-setting laws and proposals were designed to impose even more extensive constraints on spending—constraints that were likely to be more effective than CON laws precisely because they were highly arbitrary and avoided the necessity for challenging in specific cases the medical profession's tendency to equate desirability with need. The premise of rate or revenue controls was that physicians, operating under government-imposed resource limits, would develop new and more efficient standards of practice. Again, however, the system was viewed as a single entity, to be dealt with as an entirety

and changed from top to bottom all at once.

The Current Era—Will a New Paradigm Emerge?

It appears that we have now passed through the era when the main policy issue was whether the medical profession or government would hold the upper hand in managing the "system" and whether the medical profession's standards would be set with or without government-imposed constraints. Congress defeated President Carter's hospital cost-containment bill in 1979, and the theme of competition, as a third policy alternative (involving neither professional nor government control), has been heard plainly ever since. Although competition was largely a theoretical academic idea in the 1970s, it did have a few followers. Their rallying point was HMOs, which were beginning to demonstrate that it was practically possible to have *alternative* delivery systems, some of them featuring different styles of practice—that is, different standards — than the fee-for-service system. This new theme of competition was bolstered by antitrust enforcement that began in the late seventies and that was aimed at curbing efforts by organized providers to impose their views on the system as a whole and to punish those who experimented with different methods of paying for and delivering care.

Obviously, the notion of competition represented a direct challenge to the old paradigm. Specifically, it implied a major decentralization of decision making in which much of the power to define the nature and content of the product to be purchased would devolve on consumers and their agents in the private sector. Since the late seventies antitrust law has barred organized medicine from enforcing its collective judgments and preferences as coercively as it once did. Although the medical profession is still free to operate accreditation, credentialing, and peer-review programs, these bodies are best understood not as regulators setting and enforcing binding standards but as influential advisers to the true decision makers—public officials and private entities accountable either to voters or consumers, as the case may be.

Perhaps the policy change that has most threatened the old paradigm was the decision to make private-sector health care costs a private, not a government, responsibility. This policy decision was implicit in the 1979 defeat of the Carter bill and in the subsequent adoption by the Medicare program of prospective payment. Govern-

ment's aggressive cost-control efforts in its own programs had a number of important implications. Although providers experienced it as an exertion of government's centralized regulatory power, it was not in fact *regulation* at all, only an effort by a large buyer to save money in purchasing services that it was committed to buy. Moreover, the shift to controlling only public program costs was a definitive decentralization move, because it simultaneously asserted government's authority over its own programs, departing from past deference to professional standards, and disclaimed any intention by government to control costs in the private sector. Indeed, the federal government's crackdown threatened to shift some of the cost burden of government programs to private payers unless they found ways to defend themselves.

The removal of government as a potential regulator of private health care costs and its appearance instead as the Great Cost Shifter have had interesting and important effects. Many private purchasers, taking a cue from government's "prudent purchasing," are experimenting with new ways of purchasing (not just paying for) services. In so doing, they are beginning to appreciate some truths that are fundamentally at odds with the previous conventional wisdom. The first such truth is that health care is not all of one piece. Demonstrations by Dr. John Wennberg and others of widespread, inexplicable variations in medical practice from place to place have shown that the profession does not in fact follow consistent, scientifically justified standards of the type the old paradigm took for granted.

Another reality that is increasingly being appreciated is that a significant amount of customary medical care is of unproved or doubtful value. I am regularly struck, for example, by the findings of my Duke colleague, Dr. David Eddy, about how shaky are the scientific underpinnings of much accepted medical practice and about how many things are left out of consideration in developing the profession's clinical policies. These new realizations about health care make cost factors particularly crucial because they show that there are important trade-offs that cannot be ignored and that providers are inclined to overvalue many of the services they offer.

Finally, there is increasing appreciation in the private sector that professional standards cannot take account of the fact that patients' needs, circumstances, preferences, and tastes for health services vary. In general, consumers and their agents are gradually learning that

certain kinds of economizing, departing in material respects from previously unchallengeable professional standards, can be safe and beneficial. In so doing, they are beginning to treat medical care and medical care insurance less like a scientifically defined entitlement and more like a consumer good, to be purchased in accordance with one's appraisal (with expert advice) of its value in relation to its cost.

The implication to be drawn from recent history and the trends it reveals is that more and more decisions directly or indirectly affecting medical treatment will be made on the demand (consumer) side of the market, not the supply (provider) side. Private decision makers might, of course, decide to accept professional norms and standards and the judgments of profession-sponsored bodies as binding for particular purposes. It is, after all, impossible to write private agreements that precisely define the obligation of the doctor to the patient in each and every imaginable situation. It is therefore natural and efficient to incorporate professional norms by reference not only in the implied contract between doctor and patient but even in explicit contracts for medical care.

Private decision makers might, however, sometimes elect to reject customary norms and standards and to define the doctor's obligations in a different way. It is easy, for example, to imagine an agreement allowing the physician to omit some costly high-tech procedure that has become customary without convincing proof of efficacy. Similarly, doctors in a prepaid group practice might be authorized, within limits, to set their own standards, rejecting as inefficient or unnecessary certain practices that are customary among their fee-for-service competitors. In this same vein, subscribers to an HMO or other competitive medical plan might agree that tort actions for injuries they might suffer could not be based solely on departures from professional custom; instead, the agreement might provide that a patient, in order to recover damages, would have to prove affirmatively that the plan's doctors had not acted reasonably and prudently or had departed from practices adhered to in other prepaid plans. Alternatively, a subscriber contract might expressly define the qualifications of expert witnesses, excluding those who could not testify on cost/benefit issues. Perhaps the neatest way to reduce the pressure to conform to inefficient professional standards and to practice so-called defensive medicine would be to provide contractually that the patient could sue the doctor or hospital only for gross, not ordinary, negligence.

I do not propose to go further into the ways in which new contractual standards governing doctor/patient relationships could be drafted or implemented, either in malpractice suits or in health insurance policies that limit the insurer's obligation to pay for anything the doctor or medical consensus prescribes. It is sufficient to conclude with the thought that the medical profession, its representative bodies, and the consensuses reflected in medical practice should no longer be viewed as the sole sources of wisdom on all matters affecting the care consumers receive. Agreements varying doctors' obligations should therefore not be viewed with excessive suspicion. Indeed, precisely because professional standards are in many respects a holdover of the old paradigm, with its inadequate attention to costs and its unwarranted claims of infallibility, courts and purchasers of health care should be favorably disposed toward arrangements and therapeutic options that the profession as a whole has not approved.

Unfortunately, judicial and consumer receptivity to new standards and new methods of prescribing consumer rights and provider responsibilities will be difficult to achieve until the old paradigm is finally laid to rest. Although *implicit* departures from old standards are increasingly common, it is still difficult to discuss health care issues without falling back into old formulations and conceptions. Explicit acknowledgments that health care is a consumer good about which people should make their own comparisons of benefits and costs are still very rare. It remains to be seen whether a new paradigm, recognizing the legitimacy of contractually authorized deviations from established patterns, of decisions made by corporate intermediaries, and of consumer choice in general can finally gain ascendancy over the old one. Until it does, there is bound to be a lot of confusion and some difficulty in introducing more cost-effective methods of medical practice.

To my mind, professional standards still have an important place in the health care field. Indeed, they are almost essential to give physicians assurance that their difficult, morally burdensome choices are backed by more than just their individual judgment and that their heavy responsibility is shared by the profession as a whole. Moreover, systematic cost-conscious evaluation of medical practices and technologies, leading to recommended standards, are vital in the search for efficiency. Nevertheless, professional standards should be viewed no longer as binding on practitioners but only as advisory benchmarks

that may sometimes be rejected by private decision makers, because their validity is in doubt, because they give insufficient weight to cost considerations, or because consumers' tastes and preferences incline them in another direction.

It will be a difficult challenge — to public and private decision makers and to the courts in malpractice and other cases — to make just the right use of professional standards. What we do not need anymore, however, and indeed are well rid of, are binding rules that govern all medical practice and effectively preempt private choices. The age of decentralized decision making is arriving, and it is time that we recognize that professional standards, while still necessary and still appropriately influential with public and private decision makers, ought not to govern finally and decisively the allocation of resources to and within the health care sector.

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REVIEW

KLEIN, RANDOLPH SHIPLEY, ed. *Science and Society in Early America: Essays in Honor of Whitfield J. Bell, Jr.* 426 pp. Philadelphia: American Philosophical Society, 1986 (Memoirs, vol. 166). Price $30.00.

Reviewed by JOHN C. VAN HORNE

With this handsomely produced volume of twelve essays the American Philosophical Society pays fitting tribute to its longtime servant Whitfield Jenks Bell, Jr. A book is the most appropriate form that such a tribute should take, for Whit Bell is a prolific author (the "selected" bibliography of his works occupies twelve pages in this volume) and served as the Society's Librarian as well as Executive Officer for many years. (Readers of this journal will also be interested to know that he is currently at work on a history of the College of Physicians of Philadelphia.)

The twelve essays reflect the catholicity of Dr. Bell's scholarly interests: Benjamin Franklin (Esmond Wright, "Benjamin Franklin: 'The Old England Man'"); historical documentary editing (William W. Abbot, "William Byrd Reports on His Mission to the Cherokee in 1758"); and the history of American science and technology (Silvio A. Bedini, "'That Awfull Stage': The Search for the State House Yard Observatory"; Edward C. Carter II, "Benjamin Henry Latrobe, 'Learned Engineer,' the [APS], and the Promotion of Useful Knowledge and Works, 1798–1809"; Marvin E. Wolfgang, "Consensus and Conflict about Imprisonment: The Philadelphia Society for Alleviating the Miseries of Public Prisons, 1787–1829"; Thomas C. Cochran, "Cotton Textiles and Industrialism"; Brooke Hindle, "The American Industrial Revolution through Its Survivals"; and Joseph Ewan, "One Professor's Chief Joy: A Catalog of Books Belonging to Benjamin Smith Barton").

Dr. Bell has also published widely on the history of American medicine (including six articles in this journal), and readers of the *Transactions & Studies* will be especially interested in four essays in this festschrift.

Edwin Wolf 2nd, in "Frustration and Benjamin Franklin's Medical Books," briefly describes the vicissitudes of Franklin's medical library and then lists about 250 works known to have been owned by Franklin.

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Wolf has been at work for many years attempting to ascertain what was in Franklin's library and to track down surviving volumes from the collection. His article, which presents the results of his work on this important aspect of Franklin's reading, finds that "Franklin's medical books represented a mixture of an 18th-century consensus of what was most useful, specific texts dealing with his interests and his own ailments, and a fluttering of writings given him by friends and admirers."

Randolph Shipley Klein has written "The Men of '68: Graduates of America's First Medical School." This group biography of the first ten graduates of the College of Philadelphia to receive the M.B. reveals that all of them were from the Delaware Valley; most came from more humble backgrounds than their professors and than American physicians trained abroad; and that in general they returned to their hometowns to practice. (Interestingly, only four returned later for an M.D. degree.) The Revolution severely tested their medical knowledge, organizational ability, and stamina, and three did not survive it. A sad occurrence during the war was the atrocious conduct of Dr. William Shippen, Jr., as Director General of Hospitals for the Middle Department that necessitated testimony by one of these graduates (Dr. James Tilton) against his former teacher at a court-martial.

Bentley Glass has compiled a fascinating appraisal of "Foreign Membership of Biological Scientists in the [APS] During the 18th and 19th Centuries," in which he tries to ascertain how much value the Society placed on men *now* recognized as the greatest contributors to scientific discovery in their day. In the eighteenth century he found little regard for Germans compared with the British, French, and even Swedish, and a total neglect of Italian and Swiss scientists (Spallanzani, Galvini, Trembly, and Bonnet). In the first half of the nineteenth century only one Briton was elected, several rather ordinary Frenchmen were elected, while the likes of Lamarck and Cuvier were passed over. And for the second half of that century, he finds that German biological scientists are "gravely slighted." Among cytologists in particular, he blames member Edmund B. Wilson for the failure to recognize the great German pioneers in the study of cells in heredity. Wilson, the foremost American practitioner in the field, made no nominations of foreigners. Glass also notes the "total blindness toward the rising eminence of biology in Russia." But he presents no satisfactory explanation of the many unaccountable elections of some foreign

biologists. Perhaps considering the fact that there were no objective criteria for election, it is only to be expected that the record should exhibit such anomalies and oversights.

Jane M. Oppenheimer closes the volume with an evaluation of "Louis Agassiz as an Early Embryologist in America." She demonstrates that the Swiss-born Agassiz made significant contributions by establishing high standards for pictorial illustrations in works on embryology, by serving as an effective popularizer of the subject in his well-received *Lowell Lectures,* and by his scientific statesmanship in establishing the National Academy of Sciences.

The essays in this volume are of the highest caliber. There is something for almost everyone, but historians of medicine should be particularly pleased with these four fine contributions.

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REVIEW

MILLER, TIMOTHY S. *The Birth of the Hospital in the Byzantine Empire.* 288 pp. Baltimore and London: The Johns Hopkins University Press, 1985. Price $19.95.

Reviewed by GARY B. FERNGREN

One of the greatest contributions of the Byzantine Greeks was the establishment of a system of hospitals unequaled in the West until modern times. In this volume a young Byzantine scholar, Timothy Miller, traces the history of this remarkable institution from its beginnings in late antiquity to its eventual decline.

There were no genuine hospitals in the ancient world. The first ones grew out of early Christian ideals of medical charity and philanthropy. As Miller shows, none of the provisions for health care in classical times that have been suggested as early examples of hospitals — military and slave infirmaries (*valetudinaria*), temples of the healing-god Asclepius, physicians' surgeries (*iatreia*), or public physicians — resembled hospitals in any real sense. On the other hand, it is wrong to say (as did Sigerist) that hospitals did not exist except as institutions for the poor until the nineteenth century. Miller maintains that Byzantine hospitals (*xenones* and *nosokomeia*) were "the first to offer hospital care, certainly in the Western tradition if not in the world." They served as a model for later hospitals in the Latin West and the Moslem East and were not, in fact, equaled until the Enlightenment. Byzantine hospitals attempted to heal, not merely to care for patients, and they accepted all classes, not only the poor. They maintained, in addition to bed, board and nursing care, permanent medical staffs and trained assistants and hence were analogous in their function to modern medical institutions.

The earliest hospitals began in the latter half of the fourth century, after the legalization of Christianity had made possible the establishment of permanent Christian philanthropic institutions. They spread rapidly throughout the eastern Roman Empire and evolved gradually over the centuries, culminating in the famous Pantokrator Xenon, which was founded in Constantinople as part of the monastery of Christ Saviour Pantokrator in the twelfth century. Miller devotes a long chapter to this celebrated hospital. He examines the evidence for

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earlier hospitals to determine whether they shared the characteristics of the Pantokrator. "If earlier institutions shared many features visible in the organization of this twelfth century xenon, this would indicate a continuous tradition of hospitals in the Byzantine Empire," he says. Reasoning this way, he finds elaborate institutions on the scale of the great Pantokrator Xenon as early as the sixth and seventh centuries. Unfortunately, this method renders Miller liable to the suspicion of historical anachronism, a suspicion that is not wholly unjustified. He sometimes seems to read into earlier *xenones* a more highly developed organization than the evidence suggests, a pitfall that might have been avoided had he adopted a strictly chronological approach in tracing their growth.

The author lays the groundwork for his study by discussing, in chapters 4 and 5, the background of the development of hospitals, pointing out the importance of early Christian ideas of charity and prevailing attitudes toward rational medicine. He follows recent scholarship in concluding that the Fathers of the church were for the most part favorably disposed to medicine, in spite of the fact that some monastic movements were hostile to it. He sees the growth of hospitals, however, as resulting not solely from the church's concern for philanthropy but also from social, economic, demographic and sectarian factors that emerged in the eastern Mediterranean in the fourth century. In particular, he suggests that the Arian controversy that seriously divided Christianity (the dispute over the nature of Christ and his relationship to God) played an important part in the creation of the hospital. He admits that the evidence is circumstantial, which may deny credence to his theory. He may have overstated the importance of social and demographic factors in the origin of hospitals. Far more important, perhaps, was the spread of cenobitic monasticism and the premium it placed on practical charity of all kinds, especially on medical philanthropy. Nevertheless, Miller's treatment of the origin of Christian medical institutions in the fourth century makes an important contribution to the discussion of a significant problem, even if one doesn't fully accept his thesis of an Arian origin of hospitals.

In chapter 6, "City, Church, and State," Miller traces the later history of hospitals in the Byzantine Empire. Central to his discussion of the development of *xenones* is his thesis that the emperor Justinian (526–565) removed the public physicians (*archiatroi*) from the jurisdiction of municipal officials and reassigned them to hospitals along

with civic and imperial funds to support them. As a result, he believes that hospitals became the largest and most important charitable institutions in the Empire, capable of maintaining large staffs of physicians, assistants, administrators, and burial staffs until their decline after the sack of Constantinople in 1204. There is little evidence for a reform of the hospitals by Justinian of the proportions that Miller suggests, however, and its existence must remain problematical. He argues that the establishment and maintenance of Byzantine hospitals rested on three foundations: bishops, private philanthropists, and the largess of the emperors. Bishops had from the beginning played a prominent role in their operations and long continued to exercise a general supervision of charitable institutions. But wealthy individuals came to play an increasing role in establishing hospitals, and they naturally demanded some control over them. Finally, the emperors showed great interest in and control over hospitals and were responsible for the largest foundations, like the Pantokrator, to which they granted gifts and exemption from taxation.

One of the most interesting chapters of Miller's book is chapter 7 ("Monasticism"). Beginning with Basil of Cappadocia, who exercised such formative influence over Orthodox monasticism, monks were active in medical charity. Virtually every hospital established in the earliest period (between 350 and 451) was founded by monks. But not all monastic traditions sought to practice Christian charity through medicine. A major question in Orthodox monasticism concerned the relationship of *theoria* (the contemplative life) to *praxis* (acts of mercy and benevolence). The tension between those who advocated participation in the world through active philanthropy and those who sought withdrawal from it to pursue a life of prayer was never resolved. Miller traces that fascinating dispute, and its effect on the operation of Byzantine hospitals, with sensitivity and understanding.

In chapter 8 ("The Hospital in Action") Miller describes the facilities and operation of Byzantine hospitals: the buildings, arrangement of the patients, staff, "outpatient" services, medical training, professional societies, salaries and methods of treatment. Subsequent chapters deal with "Hospitals and Medical Literature" and the decline of hospitals after 1204. A minor criticism of these otherwise informative chapters is that Miller sometimes creates a false impression by using modern terms that are misleading in a Byzantine context (for example, "outpatient clinics" and "interns"). A much more serious criticism is that

he attempts to prove too much. Working on the assumption that hospitals provided the center of medical theory and practice, he is anxious to find a connection between hospitals and every aspect of medicine. This approach frequently causes him to go beyond the evidence. Thus he argues, in spite of a lack of evidence, that the great Byzantine medical writers Alexander of Tralles and Paul of Aegina treated hospital patients. He suggests, without evidence, that hospitals maintained scriptoria as well as libraries and so were important in maintaining medical and cultural continuity during the Byzantine Dark Age. Contrary to the evidence, he associates the physician Theophilos Protospatherios and the routine employment of uroscopy with hospitals. His explanation of why one finds so little mention of surgery in medical texts after the time of Paul of Aegina is unconvincing. His suggestion that in their contributions to advancing Greek medicine hospitals performed a function similar to that of European hospitals of the eighteenth and nineteenth centuries, and in particular to the Clinical Movement in Paris, seems dubious. Miller makes high claims for Byzantine hospitals, and much of what he writes in this regard is convincing. But it is difficult not to feel that he displays too much enthusiasm for his subject and that some of his parallels are unhistorical.

One need not agree with all of Professor Miller's conclusions in order to recognize that he has produced a significant volume that is likely to become the standard authority on the subject. One of his strengths as historian is his extensive reading in the original sources. He has assembled a vast amount of evidence that will be invaluable to all students of the subject. My disagreement with some of the positions taken by Miller should not be taken as an indication of my lack of respect for his work. As a pioneering effort it will provoke debate, and perhaps a number of its theses will be modified or even disproved. But it is an important contribution, reasonably priced, which should find a place on the shelf of every serious student of the history of hospitals.

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REVIEW

YAGGI, D., and HODGSON, P., eds. *Physicians and Hospitals: The Great Partnerships at the Crossroads.* Based on the Duke University Ninth Private Sector Conference. 202 pp., illus. Durham: Duke University Press, 1985. Price $27.50.

Reviewed by GEORGE R. FISHER III

While confessing that this book did fail in its two main goals, I heartily recommend that anyone interested in health affairs should read it, as well as all other reports of Duke Private Sector Conferences. Generous foundation support makes it possible for Duke to invite the major antagonists in current health controversies to come, expenses paid, to a private retreat where they can declare face to face what they had previously been saying only to their supporters. To read these expurgated remarks is great fun; it is even fairly informative, showing the directions in which the movers and shakers are variously headed.

The conference under discussion was called for the purpose of examining whether the hospital-centered practice of medicine, which has been dominant for the past century, is about to change into something else; and whether it should; or whether it can. Comparatively few of the participants paid much attention to that charge, mostly preferring to free associate with the word "hospital" as a starting point, and fencing with each other as opportunities presented. True, some participants, such as John D. Thompson (otherwise known as the father of DRGs), gave a scholarly appraisal of the creation of the modern hospital system by Lister and Nightingale. With the development of aseptic surgical techniques, Lister found it more congenial for surgeons to perform their duties in the hospitals organized on the Nightingale system, which up to that time had been exclusively populated by indigent patients. Surgeons felt more comfortable doing their work under one roof with an organization dominated by a head nurse, rather than circuit riding to various premises such as home care organizations dominated by general practitioners. Without going into details, this is a useful proposition for examining whether premises have changed enough in a hundred years to make a return to dispersed services a useful or cost-effective alternative to the undeniably hyperexpensive hospital concentration of services. Few at the Private Sector

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Conference bothered to address this charge precisely, and that is a disappointment, a continuing need. In addition, there was a fair amount of disputation on a related topic, the physician oversupply. If surgeons are no longer in short supply, perhaps they should no longer be placed in the center of the lazy Susan. There was discussion about who, instead of surgeons, should really be in charge of administrative conglomerates: the trustees, the JCAH, the organized medical staff, or others. No one spoke for surgeons, but perhaps no one needed to.

The other purpose for convening such an annual debating contest (between the AMA and the AHA, or the College of Surgeons, or the medical analysis industry, or HCFA, or the nurses, or the JCAH, or Blue Cross) is presumably to promote understanding through persuasion and the breaking of bread together. On reading the transcript of the conference, and noting that the participants submitted revised texts for publication, a reader concludes that the motto of the symposium seemed to be "let you and him fight."

All these reflections bear somewhat on the proposal that the College should conduct a Health Policy Center along the same general lines of other conferences on timely health topics, and publish the transactions. There can be no doubt that Duke has accomplished one thing for itself with these Private Sector Conferences: They can learn what is going on, and they can know who the participants are. Those are promising first steps toward defining policy.

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James H. Robinson
1927–1987

EDWARD H. McGEHEE

James Herbert Robinson died suddenly on June 6, 1986, while visiting his son, a student at Harvard Medical School. The loss to his family, our College, the Episcopal Church and Thomas Jefferson University is enormous.

Jim was born in Altoona in 1927. He was graduated from high school in 1944, a scholar athlete. He served two years in the Air Force before entering Penn State, then, following graduation in 1949, he entered the University of Pennsylvania, where he received his M.D. degree in 1953. After a one-year rotating internship at the Hospital of the University of Pennsylvania he was a surgical resident under Drs. I. S. Ravdin and Jonathan Rhoads, finishing his training as Chief Resident in 1958–59.

He was first in practice at Mercy Douglas Hospital, where he was Program Director in the Department of Surgery and Associate Medical Director. After serving as lecturer in surgery at the University of Pennsylvania and Hahnemann University, he went to Thomas Jefferson University in 1973 as Clinical Associate Professor of Surgery. In 1975 he was appointed Associate Dean and subsequently Clinical Professor, Director of Minority Affairs, Director of Student Affairs and Director of the Office of Promotion and Academic Standing.

Jim Robinson set high standards for himself and his students. He cared for his students and toiled with them, convinced that "there is a mistaken majority of people who intend the best for minorities by setting different standards, allowing less than top notch performance. Blacks will not be totally and equally regarded until that concept has been laid aside."

His family meant much to him. His widow, Soisette Furlong Robinson, is a Master of Social Work. James H. Robinson, Jr., took a Master's degree in civil engineering at M.I.T. after graduating from Yale; Charles F. Robinson, a lawyer in San Francisco, was graduated from Harvard and the Yale Law School; and Malcolm Kenneth, a former undergraduate at Harvard, is currently in its medical school.

Dr. Robinson was a vestryman at St. Thomas's Church in Philadel-

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phia and a member of the Board of Trustees at Episcopal Academy and the Board of Directors of the Episcopal Community Services. He served as well on the board of the William Penn Foundation, the Fellowship Commission, Singing City, the Overseers of the Philadelphia Theological Institute and the Penn State Alumni Association. He was Vice Chairman of the Board of the National Medical Fellowships.

Those who worked closely with Jim will never forget his beaming, puckish grin when he "just happened to have the data" to support his answer to sticky questions, and he could also laugh when he didn't have the answers.

His service at St. Thomas's was packed to overflowing with representatives of every organization dear to him. There were words and songs of thanks for the pleasures and benefits stemming from Jim Robinson's fifty-nine years.

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Edward Rose
1898–1987

JOHN L. McCLENAHAN

On January 29, 1987, Dr. Edward Rose died at Kendal at Longwood Retirement Community in Kennett Square, Pennsylvania. He was eighty-nine.

As a boy he attended the McCallie School in Chattanooga, Tennessee, where he was born on November 18, 1898. His father was of German descent; his mother, an unreconstructed southerner, is still remembered for her spirited declamations before the United Daughters of the Confederacy. To his great disappointment during childhood he was denied participation in sports owing to myopic eyes, but he devoured classical literature — Dickens, Shakespeare, Kipling and the Bible — holding them permanently in an extraordinarily retentive memory.

In 1915 he entered the University of Pennsylvania, and in 1921 was graduated from its medical school. After serving an internship at the Presbyterian Hospital in Philadelphia, he tested the waters of surgery for a year at the Cincinnati General Hospital before embarking on a residency at the Hospital of the University of Pennsylvania. In due course he was appointed instructor in medicine and was gradually promoted to Professor of Clinical Medicine, retiring as Emeritus in 1974.

From 1926 to 1964 he was Chief of the Thyroid (later Endocrine) Section of his department. He was a member of Alpha Omega Alpha and Sigma Xi. He was given a Lindbach Teaching Award in 1961, and his talents were further rewarded with appointments as consultant at the Bryn Mawr Hospital, the Burlington County Hospital, the Children's Hospital of Philadelphia, the Community Hospital of Jennersville, Pa., the Veterans Hospital and the U.S. Naval Hospital in Philadelphia.

In 1929 he married Dr. Elizabeth Kirk, a pediatrician. They had two sons, Edward Kirk and William Elliott.

Between the years 1923, when he reported on a case of Paget's Disease of the Bone and 1983, when his Memoir of Dr. Richard Kern was published, Dr. Rose was the author of ninety-eight scientific com-

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munications These dealt for the most part with diseases of the thyroid and parathyroid glands, with occasional digressions into such fields as pulmonary tuberculosis, lupus erythematosis and Cushing's syndrome. It was these and his skill as a teacher that established his reputation as one of America's most respected endocrinologists. The useful information they offered was supplemented by inspired doggerel he composed on festive occasions for the delectation of his friends: "Ode with Pavane for Two Endocrinologists," "A Chanson D'Amour to an Obstetrician and His Wife," and "A Philosophic Melodrama in One Act — Six Professors in Search of a Diagnosis."

Under a pseudonym in an article reprinted in the February 1952 issue of the *Atlantic Monthly** Dr. Rose described his personal tragedy, the abrupt onset of total blindness following unsuccessful surgery for retinal detachment. This occurred when he was forty, approaching the peak of his career. The article, "The Light within the Darkness: Total and Permanent Blindness," serves as a model of flawless prose and a moving chronicle of one man's grace under pressure. "As an opportunity," in his words, "for retrospection, for introspection and for summing up of the debits and credits."

To the wonder of his sighted colleagues, Edward Rose persevered as a clinician and teacher, assisted by members of his staff and by a wife whose devotion and versatile skills were a source of admiration for all who witnessed them. Relying on "an attentive ear, palpation, and a keen olfactory sense," he continued to practice, teach and write for thirty-six years.

Certified in 1936 by the American Board of Internal Medicine, Dr. Rose was a member of eleven national and local medical societies. He served as vice president of the American Thyroid Association, president of the American Clinical and Climatological Association and Chairman of the Section on General Medicine of the College of Physicians of Philadelphia.

In addition to his widow, two sons and two grandsons, he leaves a treasure of work well done and a host of devoted friends and patients whose lives were touched by his honesty and humor. At a time when so much of medicine is mechanical, they remember what an enlightened mind can deduce at the bedside through a disciplined use of five senses, or even four.

*Chapter 5 in *When Doctors Are Patients*, edited by N. Pinter and B. F. Miller. New York: W. W. Norton & Co., 1952.

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DEPARTMENT OF RETROSPECTION

Commemorative Verses.*

Read at the Centennial Dinner of the College of Physicians of Philadelphia, January 4, 1887.

By

S. WEIR MITCHELL, M.D.

A Doctor's century dead and gone!
Good-night,—to those one hundred years—
To all the memories they bear
Of honest help for pains or tears.

Good-night! a century's good-night,
To such as for our noble guild
Stood firm when death was in the air
And fear all meaner bosoms filled.

To them that like St. Christopher,
When north and south were sad with graves,
Bore the true Christ of charity
Across the battles' crimson waves.

Good-night to all that shining line,
—Our peerage—yea, our lords of thought.
Their blazonry unspotted lives
Which all the ways of honor taught.

A gentler word,—as proud a thought,—
For those who won no larger prize
Than humble days well lived can win
From thankful hearts and weeping eyes.

Too grave my song,—a lighter mood
Shall bid us scan our honored roll,
For jolly jesters gay and good,
Who healed the flesh and charmed the soul,

*From *Transactions of the College of Physicians of Philadelphia,* 1887, 3rd Series, Vol ix, pp. cdxi–cdxix.

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And took their punch, and took the jokes
  Would make our prudish conscience tingle,
Then bore their devious lanterns home,
  And slept, or heard the night-bell jingle.

Our century's dead; God rest his soul!
  Without a doctor or a nurse,
Without a "post," without a dose,
  He's off on Time's old rattling hearse.

What sad disorder laid him out
  To all pathologists is dim;
An intercurrent malady—
  Bacterium chronos finished him—!

Our new-born century, pert and proud,
  Like some young doctor fresh from college,
Disturbs our prudent age with doubts
  And misty might of foggy knowledge.

Ah, but to come again and share
  The gains his calmer days shall store,
For them that in a hundred years
  Shall see our "science grown to more."

Perchance as ghosts consultant we
  May stand beside some fleshly Fellow,
And marvel what on earth he means,
  When this new century's old and mellow.

Take, then, the thought—that wisdom fades,
  That knowledge dies of newer truth,
That only duty simply done
  Walks always with the step of youth.

A grander morning floods our skies
  With higher aims, and larger light,
Give welcome to the century new,
  And to the past a glad good-night—!

1787. 1887.

THE

CENTENNIAL

OF

THE COLLEGE OF PHYSICIANS OF PHILADELPHIA.

Menu Card of Dinner, January 4, 1887

"Feasts so solemn and so rare,
Since, seldom coming, in the long years set,
Like stones of worth they thinly placed are,
Or captain jewels in carcanet."
—*Shakespeare, Sonnet 52.*

MENU.

Huîtres en Coquille.

Haut Sauterne.

This is no fish but an islander.—*Tempest, II. ii.*

Gape open wide and eat him quicke.—*Richard III., I. ii.*

If he were opened and you find so much blood in his liver as will clog the foot of a flea I'll eat the rest of the anatomy.—*Twelfth Night, III. ii.*

POTAGE.

Purée à la Reine.

Amontillado.

1*st Witch.*—Boil thou first i' th' charmed pot.—*Macbeth, IV. i.*

POISSON.

Éperlans, Sauce Tartare.

Liebfraumilch.

That woo'd the slimy bottom of the deep.—*Richard III., I. iv.*

Pommes de Terre Parisiennes. Concombres.

Thou shouldst hazard thy life for
thy dinner.—*Timon, IV. iii.*

RELEVÉE.

Filet de Boeuf aux Champignons.

Chateau Bouiliac.

Croquettez de Riz. Haricots Verts.

I am almost ashamed
To say what good respect I have of thee.—*King John, III. iv.*

ENTRÉE.

Cotelettes de ris de Veau Royale.

Veuve Clicquot—Pommery Sec.

Petit Pois.
The tender of a wholesome weal.—*Lear, I. ii.*

Cailles Farcies aux Truffes.

They kill us for their sport.—*Lear, IV. i.*

What need I thus
My well-known body to anatomize
Among my household?—*II Henry IV., Induction.*

Punch Romain.
Let thy friendly hand
Put strength enough to 't.—*Lear, IV. vi.*

Terrapin. Pommes Soufflées.

This Alchemy,
To make of monsters, and things indigest,
Such cherubins as your sweet self resemble.—*Sonnet,* 114.

RÔTI.

Canard Sauvage.
A dish for the gods, if the devil dress her not.—*Ant. and Cleo., V. i.*

Salade de Cèleri Mayonnaise.
Trimly dress'd,
Fresh as a bridegroom.—*I Henry IV., I. iii.*

FROMAGE.

Roquefort. Brie. Crême.
You shall nose him as you go up the stairs.—*Hamlet, IV. iii.*

Sullen presage of your own decay.—*King John, I. i.*

ENTREMET.

Glace Napolitaine.
Bid the Winter come
To thrust his icy fingers in my maw.—*King John, V. vii.*

DESSERT.

Fruits. Amandes Rôties.

The bounteous housewife, Nature, on each bush
Lays her full mess before you.—*Timon, IV. iii.*

Café.

As black as Vulcan in the smoke of war.—*Twelfth Night, V. i.*

Cigares.

Cognac.

Best of comfort
And ever welcome to us.—*Twelfth Night, II. vi.*

Will you play upon this pipe?—*Hamlet, III. ii.*

THE LOVING CUP.

Love and health to all;
I drink to the general joy of the whole table.—*Macbeth, III. iv.*

TOASTS.

1. The Founders
2. The Fellows.
3. The Associate Fellows.
4. The Physician.
5. The Surgeon.
6. The Obstetrician.
7. The Medical Societies of America.

ACADEMIA

Items of Interest from Philadelphia Medical Centers

Thomas Jefferson University. A recent grant from Bell of Pennsylvania will support a Multiple Sclerosis Comprehensive Clinical Center under the direction of *Fred D. Lublin, M.D.,* and *Robert L. Knobler, M.D.*

David K Johnson, D.V.M., has been appointed the veterinarian for the university and director of the office of animal resources.

The appointment has been announced of *Clara A. Callahan, M.D.,* to be assistant dean for student affairs.

The Nyswander & Dole Award for Outstanding Contribution to Methadone Treatment in the Commonwealth of Pennsylvania has been given to *Loretta P. Finnegan, M.D.*

Effective last February, *Richard N. Edie, M.D.,* has served as chief of the division of cardiothoracic surgery in the department of surgery.

A newly established office of academic computing will be under the supervision of *Rodney B. Murray, Ph.D.*

Thomas D. Duane, M.D., Ph.D., has been named "Ophthalmologist of the Year" by the Philadelphia Ophthalmic Club.

John J. Gartland, M.D., has been named president-elect of the Council of Medical Specialties.

University of Pennsylvania Health Institutions. *Kenneth A. MacAfee, D.M.D.,* has been appointed Oral and Maxillofacial Surgeon of the Department of Dental Surgery.

A grant from The Pew Neurosciences Program will establish a new research program in clinical neurosciences at the David Mahoney Institute of Neurological Sciences. Its core investigators include *Robert Barchi, M.D., Ph.D., Marc Dichter, M.D., Ph.D., Perry Molinoff, M.D., Martin Reivich, M.D., and Michael White, Ph.D.*

Robert M. Stein, M.D., has been appointed director of development of the University of Pennsylvania Medical Center.

Announcement has been made of the appointment of *Elliot J. Sussman, M.D.,* to be the first Executive Director of the Clinical Practices of the University of Pennsylvania.

The President's New Researcher Award of the Association for the Advancement of Behaviour Therapy has been given to *Thomas A. Wadden, Ph.D.*

The Alumni Award of Merit this year was given to *Henry A. Jordan, M.D.*

A committee of the School of Medicine has approved a proposal

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to amend the requirements for admission to the School to the end of encouraging candidates to obtain a broad liberal arts education while undertaking appropriately rigorous preparation in the sciences.

Richard G. Schmidt, M.D., has been appointed director of the newly established bone banking facility.

The first incumbent of the Sylvan H. Eisman Professorship is to be *Lawrence H. Beck, M.D.*

In May the Institute for Environmental Medicine honored its founding director, *Christian J. Lambertsen, M.D.,* with a special symposium.

Peter C. Nowell, M.D., is the recipient of the 1987 Robert Roesler de Villers Award of the Leukemia Society of America.

The Medical College of Pennsylvania. A grant has been received from the National Institute of Mental Health to study "Rape Victims: Persistent Reactions and Their Treatment." The principal investigator will be *Edna B. Boa, Ph.D.*

Donald Kaye, M.D., has been elected the first president of the Pennsylvania Chapter of the American College of Physicians.

Rosaline R. Joseph, M.D., has been elected president of the Philadelphia Division of the American Cancer Society.

Hahnemann University. *William S. Frankel, M.D.,* has been appointed Thomas J. Vischer Professor and chairman of the Department of Medicine.

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MEDICINE & HISTORY

Series V Volume IX N° 3 September 1987

TRANSACTIONS & STUDIES

of

THE COLLEGE OF PHYSICIANS
OF PHILADELPHIA

MEDICINE & HISTORY

Series V Volume IX Number 3 September 1987

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Transactions & Studies welcomes articles on medicine and the history of medicine. Articles should follow the rules of good scholarship. All citations should be complete enough so that any interested reader can locate the original source easily; exact page citations are mandatory. Direct quotations, ideas, interpretations, and facts must be assigned to their proper origins. References to a medical "first" should refer to the earliest text in which the discovery appeared and should reproduce the text accurately, with the original spellings and punctuation.

Authors should submit two copies, typed on one side of 8½ × 11 inch paper; all material, including quotations and references, should be double-spaced. A short summary of the paper should also be included. *Transactions & Studies* accepts either footnotes or references, but either must be in accordance with the guidelines in *A Manual of Style* (Chicago: University of Chicago Press, 1969), 12th edition. Prospective authors are encouraged to examine back issues of *Transactions & Studies* to familiarize themselves with the format of the journal.

Photographs and other illustrations may be included. Tables must be typewritten on separate sheets; they should be prepared professionally before submission.

Please address any queries concerning the format of *Transactions & Studies* to the Editor.

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THE COLLEGE OF PHYSICIANS OF PHILADELPHIA

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The College of Physicians of Philadelphia

Celebrates Its

200th Anniversary

A Bicentennial Address

by

Ronald Wilson Reagan

President of The United States

Mr. President, Friends and Colleagues,

It is our distinct pleasure today to welcome Ronald W. Reagan, the President of the United States, in celebration of the 200th anniversary of the founding of the College of Physicians of Philadelphia. We are particularly pleased that at a forum held at the college earlier in the day a panel of our members exchanged views with the President on key health issues which confront the nation today and which will help shape health care policy for the twenty-first century. We look forward to the President's remarks following the luncheon when he will share his insights on these pivotal questions with all of us.

Philadelphia was the cradle of American Medicine and the College founders were the prime movers of that effort. The College continues to encourage the highest ethical standards in medical practice and the most enlightened and caring support for the sick. We do this by bringing together in a neutral forum physicians and other health care experts with many differing points of view. We have no special axe to grind except to gather and disseminate the thoughts and opinions of the best minds in medicine for the common good. This is expressed in our 200 year old Latin motto—"NON SIBI SED TOTI"—"Not for oneself but for all."

The College of Physicians is a medical academy to which fellows are elected by virtue of their professional achievements and of their common interest in the study and discussion of scientific, political, social, and ethical issues relating to medicine and health care. Many of the College's lectures and symposia are free and open to the public. The College possesses one of the largest and finest medical libraries in the country with unsurpassed historical collections. Additionally, the College contains a world famous medical museum, The Mütter Museum, and an historical institute, the Francis C. Wood Institute for the History of Medicine.

As the college enters its third century, President Reagan's visit both honors and reinforces its commitment to continue serving the nation in seeking solutions to new and emerging problems in the delivery of quality health care.

Cordially,

Lew Coriell

Lewis L. Coriell, M.D., Ph.D.

BICENTENNIAL LUNCHEON

April 1, 1987
Twelve-Thirty O'clock

Franklin Plaza Hotel
Wyndham Ballroom

PROGRAM

Presiding
John M. O'Donnell, Ph.D., Executive Director

Introduction Of The President
Lewis L. Coriell, M.D., Ph.D., President Of The College

Address
Ronald Wilson Reagan
President Of The United States

Presentation Of Honorary Fellowship
Dr. Lewis L. Coriell

BICENTENNIAL PROGRAM COMMITTEE CHAIR, JONATHAN E. RHOADS, M.D.
PRESIDENTIAL PROGRAM CHAIR, LEWIS W. BLUEMLE, JR., M.D.
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others abhor. If there is one dimension of the current metamorphosis of medical ethics that would have most distressed the founders of the College, it is, I believe, the way the idea of a profession is being corroded by reasons of exigency or self-interest.

What Is Ethics?

Today we face all these questions with a very different view of ethics than the traditional one.

For most of its history, ethics has been a normative science defining the right and good in human actions and telling us what kind of persons we should be. More recently, in deference to the moral pluralism of our times, ethicists have abandoned the normative quest of classical ethics. They limit its functions to conceptual clarification and conflict resolution. Instead of defining *the* good life, and *a* good life, ethics is now seen as primarily a tool for solving dilemmas and quandaries.

But, without normative force, ethics becomes little more than a frustrating search for consensus. It ends all too often in little more than a definition of irreconcilable differences. When ethics surrenders its claim to judge substantive moral issues, it becomes instead the morality of procedure. Without its pristine normative force, ethics loses its primacy of moral judgment over other endeavors. Non-moral arguments thus gain ethical force. Economics, law, science or medicine itself subsumes the functions of ethics.

One of our first problems, then, is to decide what ethics is good for. If we despair of ethics' ever answering moral questions definitively, we will have to retreat from all substantive moral questions and focus only on the morality of the decision-making process. The morality of the process will take primacy over the morality of the decision it produces.

This may be the best we can hope for in such a morally pluralistic society as ours. The effort must not be depreciated even while we recognize its limitations. This is the thrust of the multiple reports of the President's Commission for the Study of Ethical Problems in Medicine and Biomedical and Behavioral Research, of numerous court decisions and of hospital ethics committees. Such efforts are essential in settling disputes in a peaceable way. But we must remember that they leave the substantive issues unresolved. We must recognize the limitations of a purely procedural ethics when we undertake to reconstruct a viable medical ethics for the future. Especially we must not

forget that the rightness or wrongness of human acts is not in the end defined by vote or even social consensus.

The Shape of Medical Ethics to Come

These are but a few of the complex questions that must be resolved if the ethics of the medical profession is to be reconstructed. At the moment the precise answers are not at all clear. Yet I think the skeletal anatomy of medical ethics for the future is beginning to take shape.

First, it seems very unlikely that unanimity will be achieved on the most fundamental questions—those relating to the meaning, purpose and value of human life. We can expect, therefore, a pluralism of professional codes in place of the traditional single code.

One group of physicians will continue to make an explicit commitment to the good of the patient as the ordering principle of their medical ethics. They will accept the fact that some degree of effacement of their own self-interest is necessary to protect the patient's welfare. For this group, such practices as for-profit medicine; the various forms of medical entrepreneurship; investment in, and ownership of, medical facilities; and holding stock in drug companies, nursing homes and the like would be morally unacceptable. For this group the concept of medical and health care as a commodity, or the physician-patient relationship as a legal contract, would be morally repugnant. They would in essence be committing themselves to the obligations of a true profession.

My conversations with physicians around this country—in practice and academia—convince me that a significant number of physicians want to commit themselves to those ideals. Indeed, many would not want to remain in medicine if they could not do so. It would be tragic, indeed, if the profession lost this group, many of whom are its most dedicated members.

For another group all of the things the first group abjures would be acceptable and, indeed, desirable. For this group economic forces would have a dominant influence. The physician's enlightened self-interest, his pursuit of profit, the treatment of medical care as a commodity, all forms of medical entrepreneurship from investment to ownership, for-profit hospitals, health-care corporations, and for-profit HMOs would all be morally legitimate. The ethics of the marketplace would be acceptable and, indeed, regarded as the only "realistic" form of medical ethics. This group would argue like Adam Smith that in the

long run, the physician's pursuit of his own self-interest would redound to the best interests of the patient.

A third group might prefer, or feel impelled to accept, the mores of the corporate employee—the physician as proletarian and as an agent of productivity in the health-care "industry." The "product" would be health and medical care. Such things as unionization, collective bargaining, the right to strike, the conditions of work, benefits, pay scales and participation in management would form the foci of ethical concern for this group.

Many physicians and policy makers today favor the ethics of the entrepreneur or the proletarian. They are as sincere in their commitment as those who hold to a more traditional view of medical ethics. I would argue strenuously not against their sincerity but against the ethical validity of their positions.

There are obviously other forms of commitment and variations and combinations of these three basic types. Some will be morally defensible; some will not. What is certain is that different values, different commitments and, hence, different ethical norms will motivate medical and other health-care professionals. The traditional concept of a universally held set of medical-professional-ethical norms does not seem possible to resuscitate.

If this is so, justice demands that each group of physicians and each health-care institution make an explicit public declaration of the moral principle and commitments that guide it. It will also be morally requisite to disclose the physician's financial interests in the facilities and institutes he/she uses or to which his/her patients are referred. This is the only way patients can know what to expect and whom to avoid because of conflict of interest. In the future, patients can no longer assume that every physician will respect the traditional ethical commitments of the Hippocratic tradition as exemplified in Anglo-American medical ethics.

Moral pluralism is a fixture of our society. It will be reflected in medical ethics as well. As a result we can expect that patients will choose physicians and health-care institutions on the basis of their moral commitments as much as their technical capabilities. This will especially be the case with human life issues, such as abortion, euthanasia, sterilization, discontinuance of life-support measures, reproductive technologies, genetic counseling, respect for living wills and all those other ethical issues that touch on our most fundamental

philosophical and theological beliefs.

Instead of the reconstruction of a single edifice of medical ethics, we can anticipate, therefore, a plurality of sets of ethical commitments. This will no doubt divide the profession and create tensions within it and with society. We must learn to live with the reality of the incompatibility in the presuppositions inherent in these divergent sets of ethical commitments. On some critical points moral beliefs will contradict each other so seriously that peaceable coexistence may become impossible. Whenever this occurs the courts will be invoked, and ethical disputes will unfortunately be decided on legal, not ethical arguments.

All unanimity will not disappear, however. As the work of the President's Commission shows, a new consensus is growing that can provide some possibility for a shared basis for medical ethics.[7] I see the emergence of a common platform on which several different ethical structures will be erected. That platform will consist of a combination of ethical commitments from the past and those from the present. From the past I expect that the commitments to competence, compassion, confidentiality and the patient's good will be retained. From the changes in the last two decades, several new commitments will be added: respect for patient autonomy — especially as evidenced in informed consent, acceptance of surrogate decision-makers, living wills and other forms of anticipatory declarations, use of ethics committees, the discontinuation of futile life-support measures that merely prolong dying, increased participation by patients in all clinical decisions and a greater respect for the moral accountability of each member of the health-care team. On these issues there is a growing consensus among physicians, patients, nurses, administrators and the courts. Yet even here there will be wide variations in interpretation and practice because the underlying moral beliefs are so widely divergent.

Lest my predictions seem too unsettling, we must recall that unanimity has not always been the rule in the history of medical ethics. Even at its beginnings, only a small proportion of physicians dedicated themselves to the lofty commitments of the Hippocratic ethic. The majority of Greek physicians were primarily craftsmen and businessmen. They adhered more to the utilitarian ethics of a business than the self-effacing ethics of the Hippocratic Oath.[8]

Our task today is to design a new structure congruent with the best from traditional and contemporary medical ethics. From now on,

however, the effort can no longer be confined to the medical profession. Dialogue with the public as well as the other health professions is now essential.

Such an effort will necessarily be difficult and, at times, divisive. Our profession has long been accustomed to defining its ethics for itself, by itself and in isolation from the other professions and the public. The collaborative process I am suggesting would astound our predecessors as much as the actual content of the ethical systems that will emerge.

One of the necessary developments, in my opinion, is the formulation of a uniform ethics of the health professions as a whole one that would bind physicians, nurses and dentists. This would focus on the moral obligations we all share in caring for the sick. What is common to all health professions is the promise to use technical knowledge for the good of the patient. Commitments to competence, compassion, effacement of self-interest, fidelity to promises, and truth-telling are intrinsic to the whole enterprise of healing. These commitments could constitute the basis for a common ethical code of the healing professions. On this common base each profession would then erect a set of further obligations more specific to its role in health care

In predicting a plurality of medical ethical systems, I do not intend to give sanction to moral relativism. The several systems I foresee do not have equal moral coherence or validity. Indeed, some are morally wrong. The reality of moral pluralism does not excuse us from the hard task of seeking moral truth. We are still responsible for faulty moral reasoning and action.

I, for example, would argue against the absolutization of the autonomy principle, the legitimation of medical entrepreneurship and for-profit health care; against physicians as rationers of health care, as judges of the quality of life of their patients, of procedure as opposed to substance in moral decisions, against euthanasia and abortion. I hold firmly to the classical notion of ethics as a normative science capable of grasping objective moral truth by the use of human reason. I hold too to the place of religious belief as the ultimate source of morality.

I understand that these are contestable positions—the stuff of which ethical discourse is made. In a democratic and pluralistic society we must learn to live with our differences, to discuss them civilly and respectfully while maintaining personal moral accountability. We can

advance our own beliefs by persuasion and democratic processes not by force. This is a more mature and a healthier view of ethics than in days past. It means that physicians must be educated well enough to define precisely, and to resolve, the moral dilemmas in their individual clinical decisions and to engage in public dialogue on the many moral issues our technologic and sociocultural milieu present in such abundance.

Recognition of the need for formal skills in ethics has brought about a revival of interest in both the liberal arts and ethics in the education of physicians. Such an education has always been intrinsic to being a good physician. But one of the more dangerous illusions today is that somehow physicians automatically acquire ethical skills or possess them congenitally. We would shrink from such naiveté in scientific matters. We must also do so in the matter of ethics, which is an intellectual discipline in its own right.

In a technologically oriented society, the widespread study of the liberal arts, of values and ethics is required if we are not to be overwhelmed by our own technological creations or become totally subservient to the experts in technology or ethics, for that matter.

Were the College founders with us, I fully believe they would have taken the task of reconstructing medical ethics as their own. They recognized the challenge of their time to make medicine a rational and scientific discipline. Those who succeed them in the College today will, I am sure, recognize the challenge to the moral integrity of our profession.

Today's revolution in medical ethics is as profound and significant for society as the past 200 years of revolution in medical science has been. Medical ethics must keep pace with scientific advances. Without ethics science would distort medicine; without ethics medicine could pervert its own humane purposes. As we enter the twenty-first century our task is to relate science, medicine and ethics in such a way that we can continue to gain new knowledge about health and disease, that we can apply that knowledge through medical practice and that we can put both medicine and science to humane use through ethics.

I do not think that I would be amiss if I suggested that men like Rush, Redman and Morgan, whose portraits look down on us, would see the task of reconstructing medical ethics as a major responsibility of the College they founded with such high hope 200 years ago.

The Joseph and Rose Kennedy Institute of Ethics
Georgetown University
Washington, D.C. 20057

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6. *Weber* v. *Stony Brook Hospital,* 95 App. Div. 2d. 587, 467 N.Y. 2d. 685.
7. See all reports of the President's Commission for the Study of Ethical Problems in Medicine and Biomedical and Behavioral Research. Washington, D.C.: U.S. Government Printing Office.
8. Edelstein, L. 1967. *Ancient Medicine: Selected Papers of Ludwig Edelstein,* Oswei and C. L. Temkin, eds. Baltimore: Johns Hopkins Press.

REVIEW

CARRICK, PAUL. *Medical Ethics in Antiquity.* 242 pp., illus. Dortrecht and Boston: Reidel, 1985. Price $37.95 (hardback); $15.95 (paperback).

Reviewed by DAVID E. EPSTEIN

Dr. Paul Carrick has written a scholarly, highly readable study of the medical ethics of ancient Greece and Rome. Drawing extensively on both primary texts and the critical work of others, he has crafted a comprehensive account of the important philosophical and moral currents that shaped the practice of medicine in the ancient world. Although the physicians of antiquity were spared some of the moral dilemmas created by modern medical technology, they and the philosophers of their time debated the ethics of euthanasia, abortion, and eugenics and anticipated modern concerns regarding sensitive aspects of the doctor-patient relationship, such as confidentiality, patients' rights, truth-telling, and professional commitment. Much can be learned from classical writings on these subjects, and Dr. Carrick has done a great service in organizing them in accessible form and relating them to contemporary concerns.

Because of its enduring prominence, the Hippocratic Oath is widely assumed to represent the dominant medical-ethical ideal that prevailed in ancient Greece. Carrick challenges this popular conception, demonstrating convincingly the absence of a singular, authoritative ethical tradition governing the development of ancient medical practice. Not surprisingly, in a historical period of great intellectual ferment, various distinct philosophical schools of thought espoused sharply differing positions regarding the role and responsibilities of medical practitioners and found adherents among physicians. Pythagorean thought, for example, presumed a belief in a Supreme Being that values each human soul and holds each human life to be of intrinsic value, and, on this basis, categorically opposed abortion, suicide and euthanasia. Plato, in contrast, found abortion, euthanasia and infanticide to be justifiable on utilitarian grounds, consistent with the view that the value of an individual is ultimately defined by the society as a whole and is subordinate to the common good. Yet a third, in some respects more complex, influential perspective was provided by Aristotle, who fa-

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vored infanticide for defective newborns on the grounds that they lacked the capacity for a "minimal good life," while strongly opposing euthanasia because of his belief — later shared by the Stoics — that dying constitutes an important moral challenge that one should confront bravely. Abortion was deemed acceptable up to such time as the fetus was considered to be informed by a "rational soul." In his discussion of these issues, Carrick provides much evidence of a diversity of approaches to the ethical challenges of medical practice in antiquity and clearly places each perspective in broad philosophical context.

What, then, was the historical significance of the Hippocratic Oath? Carrick suggests that the Oath, far from representing the dominant ethos of ancient medicine, was most likely an esoteric document reflecting the views of a relatively small group, possibly a movement aimed at reforming Greek medical practice. Some scholars, notably Edelstein, have argued that the Oath was the exclusive product of the Pythagoreanism of the fourth century B.C.E.; Carrick disagrees, but does credit the Pythagorean school with decisive influence on the ethos articulated by Hippocrates. Interestingly, those strains of Greek moral thought that found expression in the Oath paralleled then-current Hebraic teachings and subsequent Christian teachings, all emphasizing the supreme value of human life. Whatever its exact origins—a question that remains in dispute—the Oath thus embodies a timeless and near-universal ideal, which no doubt accounts for its remarkable relevance to the concerns of the medical profession for almost 2,500 years.

This book will appeal to readers of varied backgrounds. It assumes no prior knowledge of Greek history or philosophy, and is, therefore, quite accessible to the general reader. Yet the professional philosopher or classicist will find in it a rigorous, well-referenced study. It should prove to be a useful text for courses in philosophy, history of science, and medical humanities, and a valuable addition to the library of the interested physician who seeks to broaden his intellectual horizons and deepen his ethical sensibility.

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REVIEW

WOLF, S. G., JR., and FINESTONE, A. J., eds. *Occupational Stress.* 243 pp., illus. Littleton, Mass., P.S.G. Publishing Company, 1986. Price $29.50.

Reviewed by EDDY A. BRESNITZ

All workers regularly experience occupational stress and its myriad effects. Obviously, the source and amount of stress vary with the job requirements. The response to stress varies with the employee and with the preventive measures in place to help the employee cope with all stressors. *Occupational Stress* is a compendium of essays that address the sources, responses and prevention of work-related stress. Unfortunately, the book does not accomplish its goals in a consistent fashion.

The book is divided into five sections: (1) background; (2) bodily mechanisms; (3) etiology; (4) responsibilities and liabilities of management; and (5) prevention and therapy.

The initial chapter fails, unfortunately, to outline systematically either the scope or the contents of the book. Chapter 2 is a brief and incomplete review of the history of occupational stress. Chapters 3 and 4 in Section 2 are a review of the physiology of stress, something better done in a textbook of physiology.

In the third section by two Swedish authors a chapter on the characteristics of the workplace and another on shift work are particularly well written. Another on alcohol and drugs gives a reasonable discussion of the frequent effects of alcohol. Very little is written about drug abuse.

Another chapter in the third section explores the characteristics of employment that modify the risk of heart disease. It is also well presented and noteworthy in its detailed description of the many studies in this area. This is in contradistinction to much of the book, which is either anecdotal or insufficiently detailed in its scientific discussion.

The fourth section, on corporate responsibilities, comprises three chapters that treat their subjects rather superficially.

The final section includes several useful chapters that give general discussions and guidelines on preventing and treating occupational stress.

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This book omits or insufficiently discusses several major current topics of importance that either contribute to or are the product of occupational stress. There is virtually no discussion of non-alcohol-related drug use and abuse, drug testing, the stress of environmental/physical hazards, AIDS in the workplace, discrimination and child-care issues. In addition, the editors fail to tie the chapters together in a coherent fashion. Finally, some chapters have little to do with the subject of stress or have minimal scientific basis.

In summary, *Occupational Stress* is a reference book that occasionally shines but is generally incomplete and superficial.

The Medical College of Pennsylvania
3300 Henry Avenue
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William H. Erb
1907–1987

LLOYD W. STEVENS

William H. Erb died on January 5, 1987, at the age of 79. Born in New Berlinville in the Pennsylvania Dutch Country, he never lost the value system he learned there. Simplicity, honesty, a concern for others and family were evident in all he did. His advice to many was "count your blessings, don't compare them."

He graduated from the University of Pennsylvania in 1927 and from its School of Medicine in 1930, a member of Phi Beta Kappa and Alpha Omega Alpha. Following a two-year internship at the Hospital of the University of Pennsylvania he continued his training in surgery there under Charles H. Frazier and Eldridge Eliason and spent a year abroad studying in the leading surgical clinics of Germany, England and Scotland. In 1939, certified by the American Board of Surgery, he began a long and distinguished career in surgery.

As a teacher Bill was practical and solid with a grasp of the student's point of view. He served on the faculty of the University of Pennsylvania from 1932 until his retirement as Professor of Clinical Surgery in 1975. He was also a member of the faculty of The Women's Medical College and the Graduate School of Medicine of the University of Pennsylvania from 1946 to 1950. He was a member of the surgical staff of the Hospital of the University of Pennsylvania, the Philadelphia General Hospital, Presbyterian Hospital, The Graduate Hospital, Women's Medical College Hospital, Taylor Hospital in Ridley Park and the Riddle Memorial Hospital in Media, Pennsylvania. In later years he was honored by his alma mater with the Alumni Award of Merit in recognition of his achievements.

His many hospital affiliations over the years speak for his industry and the high esteem in which he was held by so many. In his work he combined conservative judgment with an uncanny ability to make the most difficult technical procedures seem simple.

At the Philadelphia General Hospital his loyalty and devotion helped to preserve the reputation of that institution as an outstanding teaching hospital through years of political turmoil and change. There he served for thirty-six years in many capacities, from chairman of the

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Department of Surgery to president of the Medical Staff. Taylor Hospital, just across the street from his home in Ridley Park, where he was Chief of Surgery from 1942 to 1972, is a fitting monument to his patience and generosity. He saw it grow from a struggling community hospital to a modern suburban medical center serving a wide area of Delaware County. No one contributed more to that success story.

He received many honors: He was president of the Philadelphia Academy of Surgery; president of the Delaware County Medical Society and the Delaware County Cancer Society. While this record of activity and achievement seems in itself notable, there is much more I can attest to personally for a man whose friendship I enjoyed for forty years. He was my first instructor in surgery. Later we were associated in practice for thirty years. We always shared mutual trust, purpose and goals. He was a wonderful doctor. He never wore "religion on his sleeve" but his attributes were those of a godly man: humble, impeccably honest, and a cheerful giver, generous with his time, his talent and his possessions. His loyalty to the institutions where he worked was unwavering. His family always came first. He was a devoted son, husband and father; few will leave such a legacy to Sally, his wife, to Bill, Jr., his son, and to his daughters, Patsy and Susie.

Almost 2,000 years ago the Apostle Paul, writing to the people of Corinth, urged them to be "steadfast, immovable, always abounding in the work of the Lord, knowing that your toil is not in vain." That was Bill Erb. We shall miss him, but what he did will not be forgotten!

1204 Round Hill Road
Bryn Mawr, Pennsylvania 19010

Katharine R. Sturgis
1903–1987

JOHN L. McCLENAHAN

Katharine Sturgis, M.D., (née Rosenbaum) died on March 28, 1987, at Cathedral Village, a retirement community in suburban Philadelphia, of complications secondary to valvular heart disease.

She was born in Philadelphia on September 3, 1903, to parents affiliated with the city's every cultural and artistic resource. Her bent from the beginning was toward medicine, first nursing and then, in her own prophetic words, as "one who was at the top level." She excelled as a student at William Penn High School, where her ambition was encouraged by a sympathetic principal, William Lewis.

In 1922 she undertook premedical studies at the University of Pennsylvania. These were interrupted by an early marriage, the birth of two children and a divorce. She supported herself and her family by taking work as a secretary to Dr. I. S. Ravdin and then resumed her studies at Penn State University. In 1935 she entered Women's Medical College where, under the stress of study, want and duties as the single head of a household, she developed tuberculosis. After a year at Trudeau and a sojourn at Eagleville Sanatorium her health improved following a course of artificial pneumothorax and the ministrations of a devoted friend, Dr. David Cooper. She returned to medical school, was elected a member of Alpha Omega Alpha in her junior year and won an M.D. degree in 1940 at the age of 37.

Following an internship at Women's Medical College Hospital, she accepted a residency in pulmonary diseases at Herman Kiefer Hospital in Detroit. Then, at the invitation of Dr. Herman Hilleboe of the U.S. Public Health Service, she returned to Philadelphia to direct the city's mass X-ray screening program. While so engaged, she taught at Women's Medical College, distinguishing herself at the bedside and in the clinics as, in the words of a colleague, "the quintessential teacher."

With a career on a rising tide her honors abounded. She was named Professor of Preventive Medicine at her alma mater and in 1954 earned a master's degree in Public Health at Johns Hopkins University. She chaired the Committee on Public Health and Preventive Medicine at the Philadelphia County Medical Society, served on more than a dozen

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of its other bodies, was elected its first woman president in 1967 and subsequently received the coveted Strittmatter Award. She was in constant demand as consultant at hospitals and health associations. Elected president of the American College of Preventive Medicine in 1969, in due course she received the Elizabeth Blackwell Award from the New York Infirmary, the Trudeau Medal and the Philadelphia Gimbel Award. In 1969 the Medical College of Pennsylvania named her an Honorary Doctor of Medical Science and a year later presented her with its Alumnae Achievement Award.

Gifted as a writer, she wrote more than 100 articles on pulmonary disease and served for eleven years as chief editor of AMA's *Archives of Environmental Health.*

The College of Physicians elected her a Fellow in 1951. An ardent and generous partisan, she was named its first woman president in 1972, withdrawing eventually for reasons of health.

Dr. Sturgis's early concern about the toxicity of tobacco led her to tireless efforts to expose its hazards and to discourage smoking with an audacity that aroused admiration and amazement. Her researches on the early detection of lung cancer and pulmonary tuberculosis appear as standard references in current medical texts.

She married Joseph R. Boucot in 1944. He died in 1962 and her subsequent marriage to Samuel Sturgis, M.D., terminated with his death in 1983. She is survived by her son, Arthur Joseph Boucot, Ph.D., of Corvallis, Oregon, and a daughter, Nancy G. Boucot Cummings, M.D., of Washington, D.C.

In contemplating so rich a life, one is touched by the courage of this lady, a prodigy in a city of notable physicians. It was this and a sense of purpose that carried her over disheartening obstacles and prejudice to pinnacles of achievement that any man would have been proud to attain. In debate she was candid and resourceful. As a teacher she was memorable, listening to patient and student with heart and eye. As a scientist she was honest, advertent and articulate, putting down her observations in clear, uncluttered prose. She was a lover of disparate things — music, paintings, figurines of angels. Incontrovertibly feminine, she loved fine clothes. From being a doctor she took pride; from being a wife she took joy. Such a model of coherence — earth and sky, hard and soft, yin and yang — may not soon pass our way again.

19 South 22nd Street
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DEPARTMENT OF RETROSPECTION

Objections to Compulsory Health Insurance

GORDON J. SAXON

Compulsory health insurance is a misnomer for a condition of affairs which in reality is a true form of taxation in which the taxed individual pays one-third, the employer pays one-third and the state pays one-third. It is certain that the employee will pay his third. We also know that the employer's third will be added to the cost of production and that the employee will pay a portion of this third, and it is also questionable if a portion of the third the state is supposed to pay will not eventually revert to the so-called insured or taxable individual for ultimate payment.

Compulsory health insurance is a piece of political machinery, having had its inception in Germany. Here it was the product of Bismarck's mind and was designed primarily to overcome the socialistic tendencies of the day and to further the propensities of the imperialistic mailed fist. Its results in Germany have been definitely and undeniably in favor of imperialism. One phase of the situation, however, Germany did not see. She did not see that soon she was to become saddled with an ever-increasing expense which constituted an incubus and placed her in a delicate position with her competitors on the continent, who were not handicapped with such a cumbersome and expensive piece of imperialistic legislation. It therefore rapidly became Germany's intensive effort to energetically prosecute a campaign of propaganda to encourage her competitors to adopt the same scheme. Now in this Germany has been successful; in fact so successful that there scarcely remains any European country today which does not have this impediment upon its progress. England has been the last victim, and it was thought that as soon as the war was over England's national deficit would decrease. Instead of this, however, this recently enacted legislation, probably the most complicated of all of England's laws, has been definitely responsible in that country for an ever-increasing na-

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tional deficit. I have said that in Germany it fostered the interests and the activities of the imperialistic mailed fist. Has it done more than this? Let us look at a report from Germany comparing the cost of insurance of the years 1911 and 1901. In 1911 the German sickness societies spent more than twice as much as in 1901, although the number of members increased only one-third. Apparently, therefore, it has not accomplished in Germany what its proponents claim it will accomplish in our country.

What is compulsory health insurance supposed to accomplish in our country? We are told that the wage-earner loses nine days every year through sickness and that the average wage, which has been but no longer is, $2 per day, and that the number of wage-earners is about 33,000,000. We are further told that the economic loss incident to the total illness of the 33,000,000 reaches the alarming total of $600,000,000. Again we are told that the purpose of the law is to save to the general cosmic plan of things this $600,000,000. In other words, it is going to restore to the employee his lost $600,000,000 and thus have a general bearing on our total social economy. Now we are furthermore told that the plan of the American Association for Labor Legislation provides that the first three days of illness shall not be covered. So we see the nine days' loss becomes a six days' prospect, but the American Association for Labor Legislation states that the indemnity shall be but two-thirds of the loss. So the six days' prospect shrinks to a four days' indemnity. That brings it down to an $8 indemnity against an $18 loss; but the process of subtraction does not end here, for the plan of the American Association for Labor Legislation provides that the employee shall contribute 40 per cent of the whole cost. So again the $8 indemnity shrinks to an actual eventuality of $4.80. We therefore see that while we started with an admitted loss of $600,000,000 we have saved to him merely $150,000,000 and have spent the $450,000,000 in the operation and manipulation of a totally clumsy and cumbersome piece of machinery.

Proponents of compulsory health insurance have made the charge against the medical profession that they are attempting to block legislation designed to conserve the health of the people; that they are doing this unmindful of the benefits that might accrue to the great majority of the people simply because it works a hardship on the medical profession, which represents an exceedingly small proportion of the population.

They further charge that the medical profession has not offered anything constructive. Nothing could be more unjust or more untrue than such an accusation.

Medical men have always aided in any measure that is conducive to better health. They have been ardent advocates, for instance, of vaccination, a measure which has enormously curtailed the income of the individual physician, and yet it is through him that vaccination in most states has become compulsory. The income that a physician would derive from one case of smallpox alone would be considerably more than he now derives from vaccination throughout the course of an entire year.

Water filtration is not a product of the engineer, nor of the professional drafter of legislation, nor of the social worker or politician. It is the direct product of medical achievement, and in Philadelphia and elsewhere has been fostered by medical organizations and by physicians individually.

Twenty years ago in the city of Philadelphia there was scarcely a physician, who was at all active in practice, that did not have anywhere from five to twenty cases of typhoid fever, deriving therefrom a considerable portion of his income, and yet it has been largely through his own efforts that this source of income has been removed.

In the distribution of food I doubt very much if the public realizes the influence that has been exerted by the doctor. It is not so long since, and well within the memory of everybody present, that milk was distributed from a milk can from door to door, and the purveyor, with mittens covered with stable dirt, reinoculated his product from door to door; but today it is delivered in milk bottles and is a comparatively safe food. The standards set for milk distribution are maintained in Philadelphia by the Philadelphia Pediatric Society.

Our boards of health are industriously engaged in campaigns against dust and flies and for proper food inspection and the proper regulation of refrigeration facilities. International commerce has benefited by the activities of medical men. An instance of this is seen in the construction of the Panama Canal. DeLesseps did not fail because of lack of funds nor because of lack of engineering ability. His project was liberally financed, and he himself had already constructed the Suez Canal. It remained for the sanitary expert to police the Canal Zone and rid it of malaria, yellow fever and other tropical plagues. The Panama Canal is the achievement of the sanitation expert essentially. The

A Presidential Forum on Health Issues

Remarks

LEWIS L. BLUEMLE, JR.

Mr. President, it's my pleasure to introduce the members of this panel:

Dr. Robert Austrian is president-elect of this College and professor and chairman emeritus of the Department of Research Medicine at the University of Pennsylvania.

Dr. William Kissick is professor of Research Medicine and Health Care Systems, also at Penn. Additionally, Bill directs the Center for Health Policy of the Leonard Davis Institute of Health Economics.

Dr. Edithe Levit is vice chairman and former president of the National Board of Medical Examiners and a member of the Council of the College of Physicians.

Dr. Paul Brucker is professor and chairman of the Department of Family Medicine of Thomas Jefferson University and an officer of the American Board of Family Practice.

Dr. Claire Fagin is Dean of the School of Nursing at the University of Pennsylvania.

Dr. Richard Rothman is the Chief of Orthopaedic Surgery at both the Pennsylvania Hospital and Thomas Jefferson University. He is also the founding director of the Rothman Institute.

Dr. Maurice Clifford, obstetrician-gynecologist and recently retired president of the Medical College of Pennsylvania, is now the Commissioner of Health for the City of Philadelphia.

Dr. Brooke Roberts is professor emeritus and past chairman of the Department of Surgery at the University of Pennsylvania. Brooke is also a past president of this College, and

Dr. Otis Bowen, we welcome you as the U.S. Secretary of Health and Human Services, a distinguished general practitioner, and former Governor of Indiana, home of the NCAA champions.

Participants' Remarks at a Panel Discussion in the Library of the College of Physicians of Philadelphia, April 1, 1987.

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May I present as a group, Mr. President, the other members of the Council who are in the audience.

Mr. President, by way of background for our discussions today, when this College was founded medical care was rather primitive. It didn't cost very much, and it really wasn't worth very much because it could not change the course of many diseases. Today, in contrast, medical care can work miracles, but the costs are fast becoming prohibitive.

Two hundred years ago those early Americans who were fortunate enough to make it through childhood faced all kinds of infections that are no longer serious threats to us—tuberculosis, typhoid fever, yellow fever and the like.

Indeed, their expectations for health and longevity were modest, whereas ours tend to border on the unrealistic. Woody Allen spoke for many when he said, "Some people seek immortality through their children or their work; I prefer to seek immortality by not dying."

And while we all want the best care money can buy when we're very sick, when we're well the medical bills seem entirely too high. We wish somebody else would pay them — the insurance company, our employer or the government.

Somehow, Mr. President, we've got to build a better connection between the responsibility for financing health care and individual responsibility for adopting healthy life-styles. We must, in short, find better ways to promote the health of all Americans and to do so economically.

Mr. President, our panelists are prepared to expand on these and related issues. Since time is limited, may I suggest that we call on some of them to do so?

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Welcome to President Reagan

LEWIS L. CORIELL

I am Lew Coriell, president of the College of Physicians of Philadelphia, and it is my great pleasure to welcome you to the College, Mr. President.

The audience consists of fellows and members of the Council and staff of the College. Some of them will participate in this forum on health issues.

The College is the oldest medical organization of its kind in the U.S. It was founded in 1787 by twenty-four physicians who were concerned about the quality of medical care provided to the citizens of Philadelphia. Philadelphia was at that time the largest city in America, the capital, the center of commerce, and the cradle of medicine in America.

The College and its members were prime movers in the founding of the first medical school in America, the first medical journal, the first pharmacopoeia, the first nursing registry, the free library, and the American Philosophical Society, to mention only a few of its activities. The College today is a dynamic part of the medical community.

It operates one of the largest medical libraries in the nation, which has a larger interlibrary loan service than any medical school. The Mütter Museum is a treasure house of medical practice over the past 200 years. The Francis C. Wood Institute for the History of Medicine and our Historical Library are unequaled resources that attract scholars from all over the world.

Most importantly, the College is a nonprofit academy or collegium where the best minds and opinions in the region have gathered for 200 years to help solve problems of health care.

We are proud of our heritage and of our continuing contributions to health policy planning. We can call on the expertise of 2,000 fellows.

The motto of the founders still guides our efforts: "Not for oneself but for all." This noble objective has been sufficiently exciting, challenging and rewarding to attract the leading physicians of the area for over 200 years.

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That is sufficient introduction. We are delighted to welcome you, Mr. President, to College Hall.

No greater tribute to the College of Physicians of Philadelphia could be imagined than a personal visit by the President of the United States and we are indebted.

The College of Physicians of Philadelphia
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THE COLLEGE OF PHYSICIANS OF PHILADELPHIA

RESOLUTION

WHEREAS, Ronald Reagan has joined us as President of the United States of America in this celebration of the two-hundredth anniversary of The College of Physicians of Philadelphia; and

WHEREAS, he has used this occasion to address some of the critical health care issues of our time; and

WHEREAS, he has throughout his life exemplified a deep belief in the values upon which this nation and this College were founded; and

WHEREAS, in the course of his own medical adversities he has taught us all, doctors and patients alike, that nature's healing process works best in the presence of abiding faith and courage;

NOW THEREFORE, BE IT RESOLVED that Ronald Reagan is hereby granted honorary fellowship in The College of Physicians of Philadelphia with all the rights and privileges appertaining thereunto.

Lewis L. Coriell, M.D.
President

April 1, 1987

Life-Styles and Social Attitudes

MAURICE C. CLIFFORD

Mr. President, the paradox of modern medicine is that today we can transplant the human heart, but not transform it. We do well at curing disease, but not very well at correcting behavior. And our behavior is killing us—the things we do to ourselves—smoking, and cholesterol and drugs; violence, frenzied striving, and loveless sex.

We are careless about our personal health, and we don't care enough about our health as a people. Alone among great nations America has no plan of universal health care. And too many American babies are dying because they are born too soon and too weak—born to mothers too young, too ignorant, too malnourished, too poor.

In my view, Mr. President, as we approach the twenty-first century we need to set ourselves two goals:

- For the sake of our health as individuals, we must control our habits.
- For the sake of our health as a nation, we must do better as our brother's keeper.

The physician leaders of your administration are on course: Surgeon General Koop with his vigorous campaign against smoking, and Secretary Bowen with his strong advocacy of coverage for catastrophic illness. Moreover, this day, made memorable by the honor your visit does our College — this auspicious day marks the effective date of national legislation increasing eligibility for Medicaid benefits for millions of Americans.

Now, let us press on, Mr. President, and Mr. Secretary, toward a better, healthier life for each of us and for all of us.

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City of Philadelphia
Room 540 Municipal Services Building
Philadelphia, PA 19102

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Catastrophic Illness

PAUL C. BRUCKER

Mr. President, the College of Physicians of Philadelphia congratulates you and your Secretary of Health and Human Services, Dr. Otis Bowen, on your leadership in studying how the government and the private sector can provide Catastrophic Health Insurance. As you observed, Mr. President, such insurance would save many from having to choose between "death and bankruptcy."

As we prepare for the twenty-first century, this significant proposal should stimulate us to explore many alternative ways to deal with devastating acute or chronic illness. Many patients prefer the least restrictive long-term care possible. In many instances such care might be in their own home rather than an institution. Long-term care can be brought to the patient, rather than the patient to long-term care. Such care at home might prevent some of the many return trips to the hospital for the expensive "tuneup," and it may lessen the demand for expensive extended-care beds. Loving care, plus good home cooking, in a familiar setting can be therapeutic. The right mix of professional help might prevent other caring members of the family from coming down with stress-related illnesses. The challenge for long-term care at home is to determine what works, or what is efficient and effective. There is no room for wasteful abuse.

Another challenge is to look carefully at medical catastrophes and attempt to prevent them. Through the kind of research that you are talking about today, we will ultimately prevent AIDS, much as we have prevented polio. Through education we will try to correct life-styles that contribute to catastrophic heart disease, stroke and cancer. Just finding the answers to these challenges will greatly reduce the amount of suffering and the amount of catastrophic insurance required.

Mr. President, the College of Physicians applauds your Administration's efforts to develop an insurance plan that will share financial risk, be competitive, and assist in helping those individuals and their families affected by catastrophic illness. As we enter the twenty-first century, let's join hands to develop cooperative, innovative efforts between the private sector and the government in order to reduce our vulner-

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ability to catastrophic illness. What a wonderful peace of mind it will afford everyone!

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Nursing as One Solution to the Nation's Health Care Problems

CLAIRE M. FAGIN

Mr. President, we know that America's scientific and technological creativity have been at their greatest in the medical arena. We are proud of Philadelphia's part in these advances. But we still face very real problems in caring for our elderly, for the chronically ill of all ages, and for those Americans who have little access to health care. We must seek ways of bringing the benefits of all our knowledge to the public.

Nursing is part of the solution to these very pressing problems of access to affordable, quality health care. Nurses have always cared for the indigent. New research has told us that nurses can provide excellent care to many segments of the population — young mothers and children, adults with common health problems, folks with chronic illnesses who are trying to get along as best they can with the strengths they have, and the elderly and their families. Collaborating with physicians, care in all settings can be of higher quality and often at lower cost than would be possible with either profession trying to go it alone. We have seen life-and-death differences because of physician/nurse collaboration in intensive care, but nowhere is collaboration more promising than in dealing with people with chronic illnesses and with the elderly. To make it happen, we must continue to attract the best and brightest to nursing and medicine as we prepare for the twenty-first century.

The health of Americans requires a new joint venture of nurses and physicians working with consumers to offer health services at lowest cost and highest quality. Legislation must enable this to occur. Nursing is a national resource and properly used can help to solve the problems we are facing today and anticipating tomorrow.

Thank you.

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Appropriate Quality in Health Care

WILLIAM L. KISSICK

Mr. President, after Thanksgiving dinner on the farm in Massachusetts, my mother-in-law would lean back and say, "I've had a great plenty." Today, despite vast frontiers of medical science yet to be explored, modern medicine must digest a technological great plenty.

Appropriate technology seeks cost-effective strategies to meet human needs. Fellows of the College of Physicians of Philadelphia advocate *appropriate quality* in health care; that is, excellence, equity and effectiveness within realistic costs.

Health care expenditures totaled 425 billion dollars last year, 10.7 percent of Gross National Product, and two and one-half times the combined sales of the American auto industry. The health care enterprise is now challenged to improve the health status of all Americans within available resources. My quarter of a century in government service and academic medicine has convinced me that relatively modest investments by foundations, corporations and the federal government in technology assessment and health services research were critical in seeking cost-effectiveness from our technological great plenty.

Regulatory and institutional reforms, combined with research and development, as advocated in your "Quest for Excellence" program, Mr. President, are imperative. Our society can tolerate no less than health care of *appropriate quality* for all its citizens. And we can afford no more.

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Cost Control: A Surgeon's Perspective

RICHARD H. ROTHMAN

Mr. President, please allow me to add my personal welcome to the City of Philadelphia.

From a surgeon's perspective, I see our country's medicine as the finest in the world—*top quality, readily available* and *personalized.* The issue of concern is how to control the cost *without* impairing these qualities.

The *principles* that I feel we share are threefold:

1st, Health care is a *right* to be shared by *all.*

2nd, Physicians must be allowed to continue to *focus on quality.*

3rd, Government and the health care system *must become* partners in the care of the aged, the poor and the chronically ill.

I agree with my colleagues that we must accept the reality of *finite resources.* We cannot compete in the world market when the medical care component in a new Chrysler product amounts to $450.00.

Three facets of the solution seem apparent to me as a surgeon "working in the trenches."

1. *Maintain Medicare* but *strengthen* it by improving its insurance base. Consider a "means test" so that the well-to-do elderly contribute more, include the younger and healthier workers and include catastrophic coverage.
2. *Reallocate our resources.* We have *too many physicians* and *too many hospital beds.* Let us educate our citizens that good health is *their* responsibility.
3. *Limit the wastes of "Defensive Medicine" by tackling the "Malpractice Crisis."* The cost of defensive practice is immense when one adds up the unnecessary X-rays, the extra hospitalizations and the useless consultations prompted by fear of legal action. These pernicious practices can be solved only with strong federal support of tort reform.

Finally, Mr. President, let me reaffirm my faith in our health care system and our citizen patients. *Together* they *can* and *will* understand the problem of better uses of our resources. I firmly believe that this country will continue to be the bastion of the world's finest medicine *now* and in the twenty-first century.

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Luncheon Program

A Historical Summary

JONATHAN E. RHOADS

Ladies and Gentlemen:

When I was asked to describe to you, in ten minutes, the status of medicine over the 200 years that The College of Physicians of Philadelphia has been in existence, I decided to use a couple of vignettes from the past.

The most famous operation of the first Professor of Surgery at the University of Pennsylvania, Philip Syng Physick, was performed on Chief Justice John Marshall when the latter developed stones in his bladder. At that time the average life expectancy was in the range of 30-35 years.

We are not certain where the operation was done but it is thought that it was done in Physick's house on South 4th Street. Marshall spent the night at the site. There was no anesthesia, no antisepsis. The patient was given a hefty drink of alcohol in the morning and probably some opium. Whereupon, the Chief Justice said to the assistant, "Is there aught else that you require of me?" On learning that that was all, he announced that he would take a nap and promptly went to sleep until time for the operation. The operation was carried out with several strong assistants holding the Chief Justice in position, speed and deftness being of the essence. Physick had been trained in these in London and had practiced extensively in Philadelphia. He entered the bladder from below, swept out the stones with his finger, probably irrigated the wound and was done, we can suppose, in two to five minutes. The Chief Justice made a satisfactory recovery and his stones are still present in the Museum at The College of Physicians on South 22nd Street.

The next glimpse I would give you came to me from my father, who interned at the Hospital of the University of Pennsylvania in 1895–96 and was then on the house staff at the Pennsylvania Hospital the following year. He described the frequent occurrence of tetanus, especially among men injured in the Pennsylvania Railroad yards, and noted that if the symptoms came on within a week, death seemed

Remarks delivered at the Bicentennial Luncheon, Franklin Plaza Hotel, April 1, 1987.

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inevitable. If the symptoms did not develop until two weeks after the injury, most of the patients recovered. Tetanus was subsequently swept away by the discovery of the tetanus bacillus and its toxin, the development of immune therapy and later by prophylaxis.

At the Pennsylvania Hospital a whole area was set aside for the care of typhoid patients, and it was the duty of the house officer to make rounds every few hours, feeling the abdomen of each patient to see if a typhoid ulcer had ruptured into the peritoneal cavity. Typhoid was conquered by purification of the water supply by filtration and chlorination.

The nineteenth century brought us anesthesia in the form of ether and nitrous oxide. At the end of the century local anesthesia was introduced, first with cocaine and then with safer products. By mid-century Pasteur had developed the science of bacteriology and had demolished the theory of spontaneous generation, i.e., the theory that infection could arise spontaneously from nonliving tissues. This impinged upon surgery through the work of Lister, whose concept of antiseptic surgery led directly to aseptic surgery as we practice it today.

In 1895 Roentgen showed that x-rays could penetrate body tissues and reveal differences in the density of deep structures. Vitamins were discovered; scurvy, pellagra and other nutritional diseases were overcome; and by 1900 syphilis and other infectious diseases were coming under control through the discovery of their causes and the perfecting of prophylactic and curative measures.

In 1935, the German, Domagk, reported the usefulness of sulfanilamide in combating certain bacterial infections. This led to the discovery of a host of chemicals and drugs that effectively controlled infections, particularly surgical infections. Today breakthroughs in medicinal chemistry have given physicians the means of controlling hypertension and prospects of lowering blood cholesterol, thus to reduce the dangers of atherosclerosis and the heart disease and strokes it produces.

Cancer remains perhaps the most resistant group of diseases but here, too, several new growths, formerly always fatal, have come under a considerable degree of control with appropriate drugs and combined therapy.

The average expectation of life has increased from 59.7 years in 1930, when I began clinical work in medical school, to 68.2 years in

1950 and 70.8 years in 1970. Our most recent figures for the United States are 72 for men and 77 for women, or an average of almost 75 years. Thus, the past two centuries have witnessed approximately a doubling of longevity.

We have come a long way and are now, perhaps, as much concerned with access to and the affordability of modern methods of diagnosis and treatment as with the technological advances.

We all look forward to hearing what President Reagan will say in a few minutes. I have no advance information. However, I will give you a few quotes from the third President of the United States, Thomas Jefferson. These are taken from a letter he wrote to his friend, Dr. Caspar Wistar, who succeeded him as President of the American Philosophical Society Held at Philadelphia for Promoting Useful Knowledge.

Jefferson writes: "The disorders of the animal body and the symptoms indicating them are as various as the elements of which the body is composed. The combinations, too, of these symptoms are so infinitely diversified that many associations of them appear too rarely to establish a definite disease and to an unknown disease, there cannot be a known remedy. Here then, the judicious, the moral, the humane physician should stop. Having been so often a witness to the salutary efforts which nature makes to re-establish the disordered functions, he should rather trust to their action than hazard the interruption of that and the greater derangement of the system by conjectural experiments on a machine so complicated and so unknown as the human body and a subject so sacred as human life."

He goes on: "It is in this part of medicine that I wish to see a reform, an abandonment of hypothesis for sober facts, the first degree of value set on clinical observation and the lowest on visionary theories. . . . I have no doubt that some diseases not yet understood may, in time, be transferred to the table of those known."

I think we would all agree that the remarkable progress that has occurred in the treatment and control of disease has been achieved along the lines that Jefferson described — objective observation and the contributions of science. Most of us have confidence that we are still early in a long line of successes in medical science. The College of Physicians of Philadelphia is planning in its third century to assist this process by storing information so far accumulated and improving its dissemination.

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Remarks by the President

RONALD W. REAGAN

THE PRESIDENT: Thank you all very much. You know, I can't help thinking what a great place this would be and a great moment to get a pain in the neck. (Laughter.) Or, maybe even a lower back pain. (Laughter.) But I left Congress in Washington. (Laughter and applause.) I don't mean that personally. (Laughter.) For me, politics is forgive, and as you may have heard sometimes, forget. (Laughter and applause.) One thing I didn't forget today, it was to bring with me someone special. I am told that he may be only the seventh physician ever to serve in the — in a Presidential Cabinet, from George Washington times until now — Dr. Otis Bowen. (Applause.)

Figure 1. The President addressing Fellows, officers and staff at The College Forum on Health Issues. From left to right: Dr. Coriell, The President, Dr. Bluemle.

This year, throughout America, our eyes are turned to Philadelphia as Americans everywhere remember that here 200 years ago, a small group of men fashioned the greatest experiment in self-government in the history of man — the Constitution of the United States. The founders represented the people of the nation and they submitted their work to the nation for ratification, which marked a turning point

The official White House text of the address given by President Ronald W. Reagan at the Franklin Plaza Hotel, Philadelphia, on April 1, 1987.

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in history. Yes, that's what I told Ben Franklin. (Laughter.) Never before had an entire people joined together so peacefully and so effectively to govern themselves.

The Constitution called for a limited government, and in the two centuries since then, many around the world have asked, how is it possible that self-government and limited government work so well in America? The answer is simple, and you're a part of it. As the Frenchman de Tocqueville found, when we Americans want to do something, we don't wait for government. We join together and do it ourselves. And there's no better example of Americans joining together for a common good than the founding, almost 200 years ago, also in this city, of one of America's first academies for the discussion of medical issues, the College of Physicians.

Yes, it was in January 1787, under the guidance of Dr. Benjamin Rush, 24 physicians joined together "to advance the science of medicine and lessen human misery." And for 200 years, the College has done just that. Its leadership in public health began with efforts to combat the Philadelphia yellow fever epidemic of 1793 and it continues to this day. And as a leader in medical studies, the College boasts one of the world's finest and most used medical libraries, one of the best medical history libraries in the world, one of the few medical museums in America, and a skull collection that would make Hamlet delirious. (Laughter.)

Yes, for two centuries the College of Physicians has made a living reality of its motto, "Not for oneself, but for all," and in the process has helped make all of American medicine what it is today—the best in the world.

I know that, as doctors, sometimes you're asked to take the spirit of "not for yourselves, but for all" a little far. And this is my way of sliding into an anecdote. Doctors somehow inspire a lot of anecdotes.

Have you ever noticed, you're in a profession where, when you're introduced sometimes at a social gathering to someone you've never met before, and the first thing that you know, when they hear that word, "doctor," they start right out by saying, "Well, Doctor, I've been having . . ." and they go on with that? Well, we had a fellow in the business I used to be in, in show business, Moss Hart, the playwright, and he was an inveterate along that line. Anytime he was introduced to a doctor, he had a complaint. And one night at a party in Hollywood, he was introduced to a Dr. Jones and immediately started talking about

this low back pain that he was having. And the fellow that introduced him was embarrassed, and he said, "Moss, Dr. Jones is a Doctor of Economics." (Laughter.) That didn't stop Moss. He turned right back to the doctor and said, "I bought some stock last week." (Laughter.)

But, in this bicentennial year, as we look back, I believe we must also look forward. We must ask ourselves, how will we prepare America for the journey ahead? How will we prepare America for the 21st century? What kind of country will we pass on to our children? And will our children be ready for the jobs and opportunities of America's future?

This challenge—preparing America for the 21st century—includes finding ways to make the best use of our science and technology. It includes building a fair, open, and growing world economy, which will be the source of many of the jobs of our future. It includes making sure that American education is the best in the world, investing in our human and intellectual capital, so our children are ready for those jobs.

It includes improving the climate for entrepreneurship and growth here at home, so that the only limits on what our children can achieve are the limits of their dreams. The key here is lower tax rates and fewer needless regulations. We've made great progress in both those areas. But the job won't be done until we get control of federal spending so that tax rates won't go up again. And that's why it's time for Congress to cut the federal budget and leave the family budget alone. (Applause.)

And, finally, and the reason why I'm here today, the challenge includes preparing American medicine for the 21st century. I said that American medicine is the best in the world, and on that, we need no second opinions, because there are no other opinions. Our competitive system has produced the finest health care in history. And with each year that passes it saves more lives, finds cures to more diseases, makes life better for more people than ever before.

Yes, the pulse of American medicine is strong. And as a result, life expectancy has been rising. Once-common diseases like tuberculosis, diphtheria, and polio are distant memories. Infant mortality is falling. The rate of Americans who die from heart problems drops each year. More cases of cancer are found quickly and treated with total success each year, and I have reason to be grateful for that.

Operations like cataract surgery, which once were difficult and

Figure 2. The President with Dr. Coriell perusing the Portrait Catalogue of the College.

required long recoveries, have become simple office procedures. And for those who do go to the hospital, average hospital stays have fallen dramatically in the past two decades.

A stock scene in the movies has a father rushing his gravely injured child to a hospital. But now when he gets there, he finds doctors are more ready for him than ever before. Intensive care units have become not the exception but the rule, as have trauma centers staffed around-the-clock with surgeons. This is an important reason auto crash deaths have fallen over the last 10 years. Crash victims have a much better chance of living if they're treated within that first critical hour, and more are.

Almost every disease we know can be rapidly diagnosed and treated. The most obvious and disturbing exception is AIDS. And yet here, too, medicine is vaulting ahead. Six years ago the world had never heard of AIDS. Since then the AIDS virus has been isolated and identified. A test has been developed that is helping to ensure that transfusions are free of contamination. One drug, AZT, has been developed that may help treat AIDS patients, and it received FDA approval just two weeks ago. Other medicines are on the way. And American researchers will soon begin testing vaccines.

This is unprecedented progress against a major virus. It took 40 years of study to learn as much about polio. It took 19 years to develop a vaccine against hepatitis B. But then our battle against AIDS has been like an emergency room operation — we've thrown everything we have into it.

We've declared AIDS public health enemy number one. And this fiscal year we plan to spend $416 million on AIDS research and education and $766 million overall. Next year, we want to spend 28 percent more on research and education and a total of $1 billion. That compares to $8 million just five years ago. Spending on AIDS has been one of the fastest-growing areas of the budget.

And that's not all. Recently, Prime Minister Chirac and I announced an agreement that opens the way for cooperation between researchers in France and the United States. We are also unlocking the chains of regulation and making it easier to move from the pharmaceutical laboratory to the market with AIDS drugs. AZT received FDA approval in just four months, and that is one-fifth the average time for reviewing drugs. No, the limit on AIDS research today is not money or will, but the physical limits of research facilities and the number of people trained in the necessary techniques.

But all the vaccines and medications in the world won't change one basic truth—that prevention is better than cure, and that's particularly true of AIDS, for which right now there is no cure. This is where education comes in. The Public Health Service has issued an "information and education plan" for the control of AIDS. The federal role must be to give educators accurate information about the disease. Now how that information is used must be up to schools and parents, not government. But let's be honest with ourselves. AIDS information cannot be what some call "value neutral." After all, when it comes to preventing AIDS, don't medicine and morality teach the same lessons?

Some time ago I heard the story of a man who received what turned out to be a transfusion of blood contaminated with the AIDS virus. He was infected, and in turn his wife was infected. And within two years, they both had died. Well, I'm determined that we'll find a cure for AIDS. When the Carthaginian general Hannibal was preparing to cross the Alps and was told there was no way across, he said, "We'll find a way, or make one." And that's the kind of determination we all have about curing AIDS. We'll find a way, or make one.

American medicine is making miracles commonplace — (applause)

— making miracles commonplace, and that's good news as America prepares for the 21st century. But while our quality is the highest in the world, so are our prices. Last year, medical costs climbed seven times faster than the rate of inflation. It's getting to where many patients feel that the recovery room should be next to the cashier's office. Doctors, patients, insurers—everyone feels sick about the rising cost of getting well.

As a nation, we spend up to twice the proportion of Gross National Product on health care as such major trading partners as Japan, Britain, and Canada. One of our greatest challenges in preparing for the competitive world of the 21st century is to get this medical cost crisis under control. Worst hurt are the uninsured and the elderly citizens on Medicare who face a catastrophic illness. Our catastrophic illness proposal will help those on Medicare. And as part of the package, we will also encourage the states to use their authority to require catastrophic coverage in insurance available through employers. The aim here is to make sure the guy who pumps gas or works in the corner store can get coverage, too.

But as we protect those who are most vulnerable, we must also do something to hold costs down. And let's face it, government has played a large role in the inflation of medical costs. As the head of one suburban hospital told a reporter not long ago, "The incentives used to be to keep people in the hospital, to perform more tests and procedures, to increase costs." When we came into office, Medicare was facing bankruptcy, and, when it came to the public assigning liability, doctors were hurt, too. Stories of soaring costs and excessive bills tarnished the profession's reputation.

Four years ago, we changed the Medicare hospital payment system. We also allowed health maintenance organizations and competitive medical plans to contract to give care, and the results were astonishing. Health care inflation was cut in half. Efficiency rose. Service did, too. And the Medicare Trust Fund was pulled back from the brink. And still, to insure that the Fund remains strong through the year 2000, we must do more. And that's why I've sent a new package of proposals to Congress.

A lot is wrapped up in that package — more choices for Medicare beneficiaries, more incentives for doctors to improve efficiency, more incentives for states to give more choices to those on Medicaid. But let me tell you one thing that will not be in that or any future package

from my administration — a mandatory cost containment system. I know some want to go that route, but a mandatory system would discourage innovation, restrict services, and be a step toward government control of the entire medical profession. American medicine is the world's best because it is private, and it must stay that way. (Applause.)

Now let me turn to one of the most important cost issues facing medicine and many fields today — liability insurance and tort reform. When I hear of what goes on in the courts, it reminds me of the

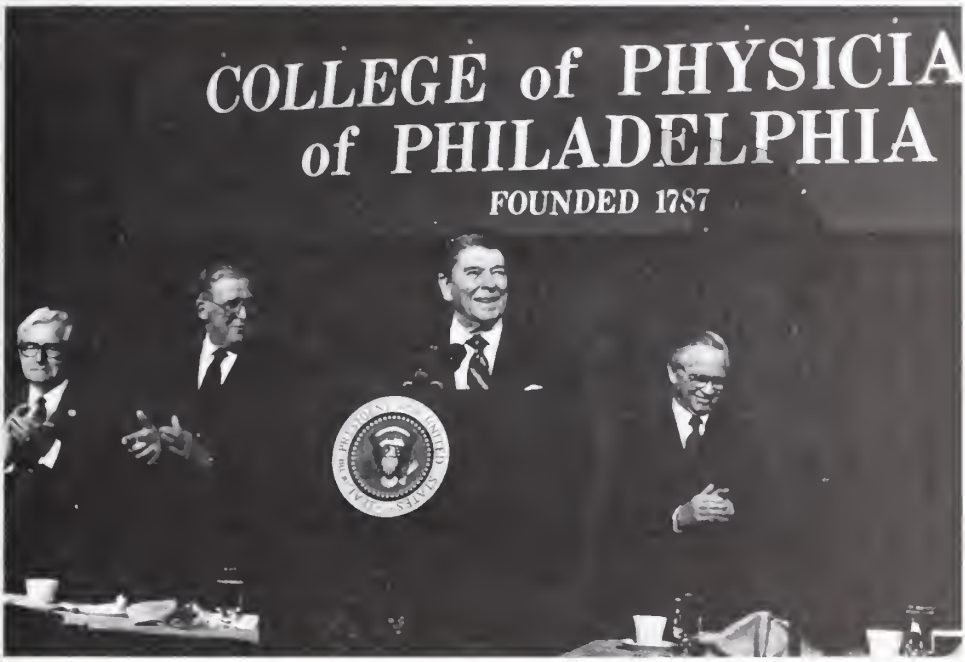

Figure 3. The President acknowledging applause before speaking at the luncheon meeting at the Franklin Plaza Hotel. From left to right: Dr. Otis R. Bowen, Secretary of Health and Human Services; Dr. Jonathan Rhoads; The President; Dr. Lewis Coriell.

hypochondriac who was complaining to the doctor. He said, "My left arm hurts me. And also, my left foot and my back. And oh, there's my hip. And yes, my neck."

Well, the doctor muttered something to himself, sat the man down, had him cross his legs, tapped him there — you know, that spot, with the little rubber hammer. He says, "How are you now?" The patient said, "Well, now, my knee hurts, too." (Laughter.) Sometimes it seems

as though the courts are ready to award damages even to that man.

Last year, a jury awarded one woman a million dollars in damages. She'd claimed that a CAT Scan had destroyed her psychic powers. (Laughter.) Well, recently a new trial was ordered in that case, but the excesses of the courts have taken their toll. As a result, in some parts of the country, women haven't been able to find doctors to deliver their babies, and other medical services have become scarce and more expensive.

This is both a state and federal matter. When Secretary Bowen was Governor of Indiana, Indiana reformed its liability law. Two-thirds of the states — including Pennsylvania — have taken action since the beginning of 1986. It's time to make it 50, and for Congress to follow, too.

We can debate the details, but doesn't it make sense in effect to give lawyers a Hippocratic Oath, so that they will, as you swear to do, "abstain from every voluntary act of mischief." (Applause.) Although I guess, for some lawyers — and I emphasize some — mischief is a compulsive act. (Laughter.)

I've talked today about some of the challenges facing American medicine as we prepare for the 21st century. Sometimes it's easy, particularly on the cost issues, to turn to government for the answers. Yes, government has a role, but, in the end, physicians are in charge of this operation.

And just as a surgeon must decide when to call for the scalpel, clamps, and thread during an operation, you must decide when to call for the tools that will help you remove enlarged costs from the body of medicine. I heard from a panel in the college library today about bringing down costs by making better use of nurses and other health professionals. Well, you must decide how and when to do this. A few negligent doctors can raise the health care and liability insurance costs for everyone. You must decide if medical societies will get tough on those guilty of negligence or of failing to conform to the ethical standards of medicine.

As patients expect more from medicine and as they pay more, they also want to know more about their choices. And you must decide how to get the information to them. As less expensive, simpler procedures become available, you must decide when to use them. In your hands is American medicine's great tradition of healing all in need, regardless of their wealth.

Figure 4. The President accepting his Certificate of Honorary Fellowship in the College of Physicians of Philadelphia.

And let me add one other thing that is vital to our nation's future, that in many ways is in your hands as well — the war on drug abuse. You can teach your patients about the health risk of drugs. You can show them—particularly your young patients—why it's important to them, their families, and their communities to "just say no" to drugs.

Yes, your hands will fashion the future of American medicine. But I believe that's just saying that American medicine is in the best hands in the world. Compare your healing powers to the doctors of any other country. Take, for example, the Soviet Union, which talks so

much about the superior quality of its medicine, but where sanitation is so poor that, as recently as two years ago, a third of all operations there left patients with post-operative infections; where a third of all hospitals do not have adequate facilities for blood transfusions; and where, partly as a result of poor medicine, life expectancy has been falling and infant mortality climbing. There's no contest there or anyplace else. You are the best.

I say that with confidence, because I know the quality and commitment of America's physicians, not only firsthand, but through my family, as well. My father-in-law was a physician. My brother-in-law is. I saw their dedication to medicine. I saw my father-in-law's devotion to his patients and to his students. I saw his enormous dignity. And I saw his dedication to excellence, how he constantly searched for better ways to diagnose and cure. Yes, I saw how he helped people, whether or not they could pay, and treated all patients with the same courtesy and respect.

As our nation prepares for the 21st century, I'm confident that American medicine remains in hands like his. So I say to you, some of America's most distinguished doctors, let us begin to get ready now so that in the year 2000, American medicine will still be the best and most widely available in the world, and physicians across our land will say with pride, "Not for oneself, but for all."

Thank you and God bless you. (Applause.)

The White House

The Ethics of Medicine: The Challenges of Reconstruction

EDMUND D. PELLEGRINO

Introduction

In the Charter which they established for the new College of Physicians of Philadelphia, the founders, Rush, Redman and Morgan, committed themselves to advancing medical science, to investigating the cause and cure of all disease and to bringing "uniformity and order into the practice of physick."[1] As good men of the Enlightenment they fully expected science to be the instrument that would transform medicine. They could not possibly envision how profound those transformations would be. They would have been astounded, but pleased, at the progress of medical science since their times.

I suspect that they would have been even more astounded, but also dismayed, by the transformations over the same period in the ethics of their profession. Ethics in their day dealt with the unchangeable, with the duties and virtues expected of the good physician. These duties they found in the Hippocratic ethos, the teachings of the Roman Stoics and the Christian ideals of charitable service. This concept of medical ethics was clearly set forth in 1803, a few years after the College's foundation, with the publication of Thomas Percival's *Medical Ethics.* That book was then and remained until recently the foundation of Anglo-American ethics.[2]

In the last two decades the ancient canons of medical morality have undergone more drastic change than in the whole of their previous history. As a result, we are today in the midst of a veritable deconstruction, even a disarticulation, of the ancient edifice of medical morality —especially those precepts at the moral center of medicine, the ethics of the relationship between physician and patient. Every one of the ancient precepts is being scrutinized, challenged or even denied. Some of this is salubrious; some of it is dangerous. Our central task in medical ethics today is to distinguish which is which and to reconstruct a new edifice for medical ethics — one that retains what is valid in the old and combines it with what is valid in the new.

A lecture delivered on College Night, November 8, 1986, at the College of Physicians of Philadelphia.

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This is a more difficult and important task than meeting the quandaries arising from medical progress — the dilemmas of prolonging life, withholding treatment, allocating and rationing scarce resources or mapping the human genome. As medical science continues to progress, dilemmas of this kind will continue to multiply. But central to them all is the final common pathway of medical morality.

I propose to examine the major factors effecting change, the way they have changed the anatomy of medical ethics and the new questions they pose.

The Factors Effecting Change

What has accounted for the changes now transforming medical ethics? Why has it become such a vexed subject? What has set the process of deconstruction in motion? I have selected six factors for comment: technological advance, moral diversity, participatory democracy, limitation of resources, the behavior of some physicians and the state of ethics itself. None of these factors were operative when this College was established two centuries ago.

The first factor effecting change is the prodigiously expanded technological capability of medicine. Every new medical possibility expands the possibilities of moral choice. Humans can now control life, death and conception, those events that for so long were considered acts of nature or God. These powers challenge our traditional conceptions of the purpose and meaning of human life. We realize now that, if our use of these technologies is misguided, they can overshadow our humanity and make us instruments of biology rather than its masters.

Second, we must make these fateful choices without firm moral moorings. Since the Enlightenment, and particularly in the last two decades, moral consensus has eroded in western society.[3] We are sharply divided on precisely those human values that underlie our most difficult moral choices. Many people lack conviction about those values; just as many are filled with passionate intensity about them. As a result the initial premises underlying our ethical opinions are often irreconcilable. The divisive debates about abortion, *in vitro* fertilization, experimentation with embryos, withholding life-sustaining treatments and dozens of other dilemmas are ample evidence of the explicit moral pluralism of American society.

Third, this moral diversity is accentuated by the growth of partici-

patory democracy. Increasingly we demand to have a say in the decisions that affect us. This now includes the minorities and the disadvantaged, whose values were so easily ignored in the past. The civil rights movement, the rise of consumerism and the reemergence of feminism are expressions of the desire on the part of all of our citizenry for equal rights. We cherish our freedom to hold to our own views of what is right and good for us. We seek to protect our values from usurpation. We no longer delegate our trust to authorities or experts. Often they are strangers to us ethically, ethnically, socially or politically.

Fourth, we face our complex technological and moral choices at a time when we perceive a limitation of resources. As a result clinical decisions are subjected to tests of cost, to allocation, rationing and the competing claims of free and regulated market ideologies. Medicine has, as a result, become commercialized and monetarized. Economics has always been a factor in medicine. But never has the economic self-interest of the practitioner been legitimated and encouraged as it is today.

Fifth, the ethical misbehavior of some physicians has eroded the moral credibility of the profession. We need think only of the Medicaid frauds, the unconscionable fees or the errant hucksterism of our more crass colleagues. Or, in an entirely different order of magnitude, we might reflect on the amorality of the Nazi doctors. Their felonies reinforce the desire of increasing numbers of patients for protection against what they see as the power, privilege and self-serving egotism of the profession. As always the moral insensitivity of a few tarnishes the integrity of the many.

Sixth, the conception we hold of ethics itself has been drastically altered—a problem I will discuss a little later.

Resultant Transformations

All these forces have converged to transform the moral center of medical ethics — the relationship between physicians and their patients and society—in ways that would have bewildered the eighteenth-century founders of this College.

For one thing, almost every one of the Hippocratic precepts they cherished has been violated or seriously questioned. Abortions are performed; confidentiality breached; life-sustaining treatments are withheld or withdrawn; and even sexual relationships with patients

are sanctioned as therapeutic by some psychiatrists. We can no longer assume commitment to a common set of ethical precepts. The progressive abbreviation of the AMA principles from their fulsome version of 1848 to today's seven brief statements is evidence of how few things we can as a profession agree on.

Second, the fulcrum of decision-making has shifted away from the physician to the patient and his/her family. Autonomy now challenges beneficence as the first principle of medical ethics. The patient's or the family's personal preferences, values, aims and goals in life must now be factored into the clinical decision. This includes decisions about when, where and how to die.

Third, medical-moral decisions are no longer private, but public matters; they are often adjudicated in court, before ethics committees or debated in the media. Many medical relationships have come to assume more the character of legal contracts than covenants of trust. Too often patients and their doctors see each other as legal adversaries. Medical ethics in such a climate takes on the moral minimalism of law. Beneficence is reduced to its lowest level as mere non-malificence.

Fourth, the physician's commitment to act on behalf of the patient has been diluted by legitimation of the roles of entrepreneur, competitor, investor, owner, or manager in the health care "industry." Personal profit is no longer frowned on as medicine becomes a business enterprise. The effacement of self-interest that really distinguishes a true profession from a business is belittled and rejected.

Fifth, the physician's role as primary advocate of his/her patient has been eroded by society's demand that the physician be gatekeeper and rationer of medical resources. As the employees of a corporate entity, physicians are becoming proletarianized and looked on primarily as instruments of corporate profit. Their commitment to the patient's welfare is increasingly in conflict with their obligations to investors, prospective payment plans or corporate policies.

The most frequent questions I hear today are these: Who are we? What are we? What should we be? *Is it possible to be a good physician today?*

I cite these metamorphoses not to deplore all of them, or to urge a total restoration of the classical edifice of medical ethics. Some of the changes are beneficial to patient welfare; some are not. I wish rather to point to our moral obligation to reconstruct a new moral edifice that will preserve what is good from the old and combine it with what

is best in the new. To effect that reconstruction, we must answer a series of difficult but inescapable questions.

Autonomy vs. Beneficence

The first question is how to strike the proper balance between beneficence and autonomy. Both are valid moral principles increasingly in conflict with each other. Medical paternalism is no longer defensible in a democratic, morally pluralistic, educated society. But patient autonomy can become so absolute that the physician is merely an instrument of the patient's wishes. Some would have us assist in suicide, or direct euthanasia, as one recent judicial opinion suggested.[4] But the physician is a responsible moral agent as well and must be faithful to his or her own moral principles. Any new ethic must consider the moral obligations of the patient to the physician. Each has equal weight as a moral agent. A clearer understanding of mutual obligations and expectations is in order.

The power of decision for incompetent patients is transferred to a surrogate or proxy. We must define the criteria for ethical performance of the surrogate or proxy role. The legal criteria for proxy decisions are not sufficient. Restrictions on proxy power need clarification. Do parents have absolute rights over the care of their infants, for example? What happens when the surrogate's or proxy's interest conflicts with the patient's interest, or when a proxy decision does not square with the physician's assessment of his or her own moral obligation to the patient? Is the physician's responsibility primarily to the patient, to the surrogate or to society?

Two cases in point are the Indiana "Infant Doe" and the New York "Baby Jane Doe" cases. In the first case, parents and physicians decided not to treat an infant with Down's Syndrome and curable esophageal atresia. In the second, they agreed not to treat a meningomyelocele. In both cases, participants or observers disagreed, but the courts found for the parents.[5,6] How absolute are the decision-making rights of parents or other surrogates? What are the societal implications if autonomy of patients or families is immune to challenge? Is it possible to have a peaceable society when there are no commonly held moral values, or when ethics is a totally private affair?

Economics and Ethics

Another set of questions focuses on the growing conflict between

economics and ethics. There is an alarming tendency to treat health care like a commodity. But can its price, availability, quality, distribution and kind be left to the forces of the marketplace? Is health care a right or an obligation a civilized society owes its citizens? We must define the conditions for morally licit rationing of health care and the principle of justice that should dictate who gets it. Should society place the onus of rationing on the physician or appeal to the physician's financial self-interest to force him/her to become an agent of fiscal and social policy? Are there not times when the physician has a moral obligation to disobey public or institutional policies in the interests of the patient? What is the moral status of physician strikes like the recent one in Ottawa for higher pay? Are physician strikes any more legitimate if they are intended to improve conditions of care for patients? Are physicians morally justified in retaliating for high malpractice premiums by refusing to care for certain kinds of patients? Again the questions arise: Who are we? What are we about?

What Is a Profession?

Many of these questions turn on the more fundamental question of what is meant by a profession. There is a tendency today to professionalize everything we do, from drop-kicking and trading on the stock market to embalming and coaching. We seem to equate being a professional with mastering some craft, obtaining a credential or doing what we do for money.

None of these things satisfies the traditional idea of a profession. That idea has its roots in the declaration postulants made when they entered the religious life — a life of dedication to service and to effacement of self-interest in the service of others. Medicine, law and the ministry have been called professions not because they are learned but because they promise to use their learned knowledge for the good of others — others who are in especially vulnerable states. Professionals deal not with single elements of our lives but our whole lives, which we must bare to them and which, in our dependent and anxious state, makes us exceedingly vulnerable. We expect that true professionals will not exploit that vulnerability. The sick are forced to trust us in the final moments of clinical truth.

To be a professional in this sense is different from being a proletarian, an entrepreneur, a businessman, a bureaucrat — all roles some physicians are all too eagerly assuming, others find thrust upon them and

physician's activities have been largely responsible in all lines of municipal sanitation — cleaner streets, abolishment of surface drainage, rigid quarantine laws, free distribution of vaccines, antitoxins, etc.; also free administration of these if it is desired, free examination of school children, free care of persons with contagious or other diseases, and many other factors, too numerous to mention, which have proved their worth in the conservation of health.

In practically all of the medical propaganda within these lines for social betterment the medical man has been largely concerned, has received the support of the profession as a whole and has done it without pay. Another achievement of organized activities from the same source is most of the provisions for state and national sanitation. These include purification of the water supply; prevention of water contamination; sewage disposal; state free-care of the tuberculous, for tuberculosis is a preventable and arrestable disease; free medical service to all who apply; and diagnostic facilities from the state board of health laboratories. In respect to sewage disposal and water pollution it is safe to say that if the laws already in existence for the regulation of these things were to be rigidly enforced and a small portion of a compulsory health insurance budget be appropriated to such an end the curtailment of disease would be as striking as it has been under the influence of water filtration.

If the American Association for Labor Legislation were to concentrate on a plan to nationalize curfew for the children of our country their efforts would be rewarded by results which would be spelled by reduction of prostitution, reduction of venereal diseases, reduction in amount of cigarette-smoking, the production of a sturdier race and the establishment of a race definitely resistant to all of the diseases of childhood and such plagues as tuberculosis.

If any portion of the compulsory health insurance budget were annually appropriated to the project of a more universal water filtration and to more perfect plans of sewage disposal a step will again have been taken in the right direction to prevent disease, to reduce economic losses due to sickness and loss of labor and naturally to reduce poverty.

We do not need more laws. We need more rigid enforcement of those we already have. Right here, as both a state and a national provision, let me add that the enforcement of legislation regarding profiteering and gouging would enable the public to be better clothed,

better housed, more properly fed and to be definitely more healthful. All these are mentioned to show that the physician has not been unmindful of the public good, and that insofar as preventive medicine is concerned he has never obstructed legislation nor health provisions that would prove themselves worthy. Therefore his opposition to compulsory health insurance is not due to financial considerations, but due to an unprejudiced belief and a knowledge born of liberal experience that compulsory health insurance will not accomplish what its proponents claim.

In conclusion let me state that compulsory health insurance is not remedial, since it does not correct existing conditions nor does it supply an existing need. It imposes a liability where neither liability nor duty existed. It imposes dependence and places one subject to the wishes of the state whether such wishes coincide with those of the recipient. It has not reduced the incidents of illness nor poverty in countries in which it has been given a fair trial. It has been known in Germany and other countries to have increased malingering, since it enables one who is indisposed as a result of a debauch or other indiscretion to feign illness from natural consequences, to receive treatment as a matter of course together with a beneficiary stipend.

Its advocates liken it unto the Workmen's Compensation Act, a piece of legislation which is remedial, which has partially supplied an existing need and is established on a firm economic basis, none of which qualifications are possessed by compulsory health insurance.

CONCLUSION. More corrective, more remedial and more logical would be the investment annually of one-quarter of the amount necessary for a compulsory health insurance budget toward corrective measures directed to community and municipal sanitation; state sanitation; the establishment of a Federal department of health; Federal exclusion of undesirables; Federal supervision of interstate water supplies and of sewage disposal; the improvement of districts infested with malaria and similar plagues; a municipal, a state, an interstate and a Federal movement directed against the ravages of tuberculosis and cancer; common-school education; full hours in school; an ample number of teachers amply paid; community school meetings, and community health meetings for parents. Why is the public learning the beneficial influences of bathing, proper selection of food, proper hours of rest, proper and correct methods of working, correct clothing, proper sex relations, ample ventilation, isolation of the sick, curfew and a thou-

sand and one other things? They have learned these because the medical profession unaided, without any financial budget, by personal instruction, involving their own time, has enlightened the public on these points and is continuing so to do.

Finally the physician's duty in respect to this proposed legislation is to get enthusiastic, get twenty-five others enthusiastic, and get each of these to set twenty-five others thinking, organize, put up some money, fight hard and cripple the proposition now, for this scheme is not an institution for true Americans. Millions have come to our shores to avoid it, and if we exert any effort at all we will be able to thank God that it never will become an American institution.

ACADEMIA

Items of Interest from Philadelphia Medical Centers

Hahnemann University. *Harry Wollman, M.D.,* has been appointed vice president for Academic Affairs and Dean of the School of Medicine.

The Editor regrets the misspelling of the name of *William S. Frankl, M.D.,* in the June 1987 issue of *Transactions & Studies.*

Thomas Jefferson University. The appointment is announced of *Richard Depp III, M.D.,* as professor of obstetrics and gynecology and chairman of the department.

Carl M. Mansfield, M.D., professor of radiation therapy and nuclear medicine and chairman of the department, has been voted president-elect of the American Radium Society for a term of one year.

The Center for Research in Medical Education and Health Care has received a grant from the American Board of Family Practice to study the Board's process of certification of medical residents and recertification of family practitioners. *Joseph S. Gonnella, M.D.,* dean and vice president, will be the principal investigator.

The American Association for the Advancement of Science has elected *Allan J. Erslev, M.D.,* a Fellow.

John J. Viola, Jr., completing his third year at Jefferson Medical College, has been selected for a position with the HHMI-NIH Research Scholars Program.

Jean Gordon, M.D., a 1987 graduate of Jefferson Medical College, is the recipient of a Henry J. Kaiser Family Foundation Merit Scholar Award.

George Alexander, M.D., assistant professor of radiation therapy and nuclear medicine, has been appointed assistant dean of student affairs and minority affairs.

Medical College of Pennsylvania. A new program, Child Sexual Abuse Evaluation and Treatment Program, is under way, directed by *Susan McLeer, M.D.,* and *Esther Deblinger, Ph.D.*

Janet A. Parker, M.D., professor and director of radiation oncology and nuclear medicine, is a recipient of the 1987 Commonwealth Board Award.

Dorothy Barbo, M.D., has been appointed to serve on the Fertility and Maternal Health Drugs Advisory Committee of the Food and Drug Administration.

The appointment has been announced of *Barbara F. Atkinson, M.D.,* as professor and chairman of the department of pathology.

The 1987 recipients of the Christian R. and Mary F. Lindback Awards for teaching excellence are *Charles D. Puglia, Lh.D.,* and *Garrett E. Bergman, M.D.*

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Paschal Michael Spagna, M.D., has been appointed chief of the division of cardiothoracic surgery.

University of Pennsylvania Health Institutions. *Clay M. Armstrong, M.D.,* has been elected to the National Academy of Sciences.

Edward J. Stemmler, M.D., has been elected vice chairman of the National Board of Medical Examiners.

R. Bruce Heppenstall, M.D., will serve as the chief of the department of orthopedic surgery.

The John D. and Catherine T. MacArthur Foundation of Chicago has awarded a 1987 MacArthur Fellowship to *Stuart Alan Kauffman, M.D.*

By the end of 1987 it is anticipated that a program in injury care and air ambulance service will be operational under the direction of *C. William Schwab, M.D.*

Louis Sokoloff, M.D., and *Francis C. Wood, M.D.,* have received the School of Medicine's 1987 Distinguished Graduates Award.

NLM Visiting Historical Scholar Program

The National Library of Medicine plans to select one (1) recognized scholar to engage in historical research and staff consultation during the 1988-89 season. Applications are now invited from individuals interested in spending from 6 to 12 months at the Library between September 1, 1988 and August 31, 1989. Detailed announcements and application forms may be obtained from the Chief, History of Medicine Division, National Library of Medicine, 8600 Rockville Pike, Bethesda, Maryland 20894. Telephone (301) 496-5405. The closing date is February 1, 1988.

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AN ANNOUNCEMENT

On the recommendation of Council, in 1988 *Transactions & Studies of the College of Physicians of Philadelphia* will appear as a single, bound volume, celebrating and documenting the Bicentennial of the College

The proceedings of special anniversary events will be published with scientific reports and societal information as has been the case in the past. Incidentally, this journal was published as an annual issue from 1874 to 1932.

Effective on January 1, 1988, the affairs of *Transactions & Studies* will be in the hands of Russell Maulitz, M.D., Ph.D., to whom inquiries may be addressed at 19 South 22nd Street, Philadelphia, PA 19103, (215) 561-6050.

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John Chalmers DaCosta, M.D.

FREDERICK B. WAGNER, JR.

By virtue of his spoken and written words, John Chalmers DaCosta was one of the most brilliant men of his era. After the lapse of more than half a century it is fitting to recall the remarkable scholarship and personal magnetism that ranked him among the best surgical educators in the nation.

Although considered a native Philadelphian, "Jack" DaCosta was born in Washington, D.C., on November 15, 1863. His mother, née Margaret Beasley, had taken temporary residence there to be near her husband, George Tallman DaCosta, who was in the infantry of the Army of the Potomac. The DaCosta name was of Spanish ancestry, but the family had long been Philadelphian. The archives of Jefferson Medical College contains a partial genealogy record in our subject's own handwriting that traces the first identifiable family member to Isaac DaCosta, who migrated from London to Boston in 1697 and married Mary Temple. Succeeding members of the family were well-to-do and respected citizens of Boston, some of whom served during the American Revolution. Following the Revolution, a Joseph DaCosta in 1794 married Ann Tallman in Christ Church in Philadelphia. She was of German descent on the paternal side but Scottish in the Chalmers family on the maternal side. From this time on, the names of Chalmers and Tallman appeared frequently in subsequent generations.

Jack's grandfather had engaged in the East India shipping trade and was one of the founders and first president of the Camden and Atlantic Railroad.[1] Jack's father, George T., also became president of the railroad, which at that time was prospering. George named his son Jack after his brother, Dr. John Chalmers DaCosta (1834–1910), who, after working as an engineer for twenty years, was graduated from Jefferson in 1878 and became a gynecologist at Jefferson Hospital (1884–1901).[2] This led to a confusing proliferation of John Chalmers DaCostas (*Fig. 1*), since Jack's uncle had a son named after him as John Chalmers DaCosta, Jr. (1871–1920). Thus, our subject, John, and John, Jr. were

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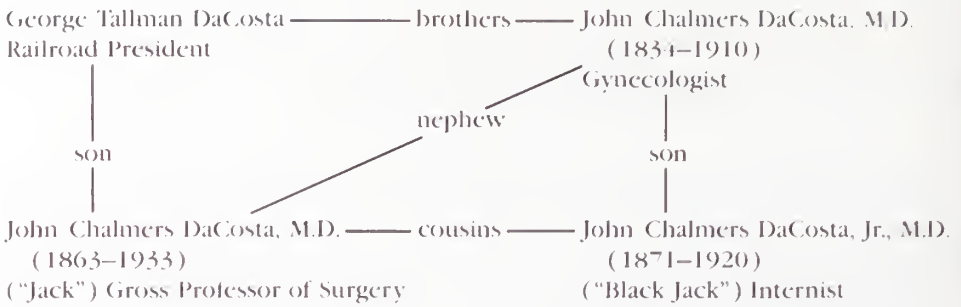

Figure 1. Relationship of three John Chalmers DaCostas at Jefferson Medical College.

first cousins. The latter was also graduated from Jefferson Medical College (1893) and taught internal medicine there, with the sobriquet of "Black Jack." The three John Chalmers DaCostas, each a Jefferson graduate and teacher, were not related to Jacob Mendez DaCosta, also a Jefferson graduate (1852) and Professor of Medicine at Jefferson (1872–1891), whose ancestry was Portuguese.

Early Years

After the Civil War the DaCosta family moved to Orange, New Jersey, for several years and then to 334 North Front Street in Philadelphia. The family was affluent and had a summer home at Cloverdale Farm, midway between Camden and Haddonfield, New Jersey. This country dwelling was adjacent to Newton Creek, in which the young DaCosta swam and fished. On rainy days he played with his brother and cousins in a gymnasium built in the barn. His father, in addition to his railroad responsibilities, found time for literature and book collecting, which profoundly influenced young Jack's impressionable character. By the time Jack was eight, his mother had taught him much of the history of Elizabethan England. It is not surprising that in this environment and with an early delight in poetry, he would recite *The Charge of the Light Brigade* and *Sheridan's Ride* for the entertainment of his family and friends.

At the age of nine an unfortunate event occurred in DaCosta's life. He was accidentally struck in the right eye by a pinecone, which eventually led to loss of sight in that eye. He was treated by Dr. George Strawbridge (1844–1914), an ophthalmic surgeon from Wills Eye

Hospital, with a compassion that profoundly influenced him to consider a medical career. Furthermore, he was fascinated by surgery and would sometimes amuse himself by trying to fashion his mother's hairpins into surgical instruments. This was not encouraged by his father, who wished him to study law.

Possibly because of his eye injury, DaCosta's parents allowed him extra concessions, such as riding the locomotives to Atlantic City in the cab with the engineer and occupying the fireman's seat. The friendships with the railroad men and pleasure in riding on locomotives persisted from these early years until he became crippled in later life.

When DaCosta was twelve, his uncle, Dr. John Chalmers DaCosta, and his father were members of the Volunteer Fire Departments of Haddonfield and Philadelphia. Their interests rubbed off on him so strongly that he developed throughout life an intimate association with the Philadelphia Fire Department.

The family moved to Delancey Street between 23rd and 24th Streets when DaCosta was fifteen. With his firm decision to study medicine, he secured a skull from a medical student and began on his own initiative to read both volumes of *Horner's Anatomy.* Having received his preliminary education at Friends' Central and Brown Preparatory School, he entered the University of Pennsylvania in 1880 at the age of seventeen. During his college years, while majoring in chemistry, he took occasion to attend the clinics in the old amphitheater at Blockley (Philadelphia General Hospital), and to observe the elder Gross, Agnew and Pancoast perform operations. Later in life, DaCosta was to write of the elder Gross that he "beheld the mighty leader a great many times, heard him lecture frequently, and watched him operate, and in him always saw the embodiment of surgical learning, dignity, and distinction, and felt that fifty years of American Surgery were speaking through his lips."[3]

Before DaCosta completed his college course, his father died and the family suffered financial reversals. His two years of college were ample at that time for matriculation at the Jefferson Medical College in 1882, from which he was graduated in 1885 as class valedictorian. After thirteen months of residency at the Old Blockley Hospital, he accepted the position of assistant physician to the Insane Department of the same institution. His dealings with the aberrations of the insane, which drained him emotionally because of his sympathetic nature, were depressing. He was also disturbed by the politics and politicians

involved in the management of the hospital. These frustrating experiences were dramatically recalled by DaCosta in an address delivered on the twenty-first anniversary of the Association of the Residents and Ex-Residents of the Philadelphia Hospital on November 12, 1907 and published in *The Journal of the American Medical Association* on April 11, 1908. This article is worth reading not only for its historic interest but also for its insight into the florid literary style and unconventional character of its author.

After a series of distressing events, a breakdown occurred when one of his patients committed suicide by hanging. According to the memoir by Dr. Thomas A. Shallow, who eventually succeeded him as Gross Professor of Surgery at Jefferson, "With the wind outside howling, and the lunatics inside shrieking, Dr. DaCosta cut down the body, took a large drink of liquor and wrote his resignation."[4]

In 1887, apparently not totally disillusioned, DaCosta became assistant physician to the Pennsylvania Hospital for the Insane, situated at 44th and Market Streets and known then as Kirkbride's. There he worked with Dr. John B. Chapin, who became his stalwart friend and further stimulated his interest in the nervous system. The experiences at Blockley and the Pennsylvania Hospital for the Insane laid the groundwork for his extensive knowledge and continued interest in neurology, which later enhanced his diagnostic skill and teaching.

On the termination of his contract with the Pennsylvania Hospital in 1887, DaCosta started a private practice and became appointed an assistant demonstrator of anatomy and one of the clinical assistants in the surgical outpatient department to Professor Samuel W. Gross, son of the elder Gross who had died just three years previously. He opened his office at 2047 Locust Street in one room of the first floor of a dressmaking establishment.

With the premature death of Dr. Samuel W. Gross from pneumonia in 1889, Dr. William W. Keen succeeded to the Professorship at Jefferson and took on the young and promising DaCosta as an office assistant. The latter had very little private practice and was as yet unmarried. As a typical DaCosta quip he would tell people that the name on this office was only "a coffin plate on a dead business." His spare time away from Jefferson Hospital and Dr. Keen's office was spent collaborating on Keating's *Medical Dictionary* and preparing his *Modern Surgery, General and Operative,* which was first published in 1894 when he was thirty-one years of age. By the following year he

had written many additional articles and was appointed Clinical Professor of Surgery.

In 1895 Jefferson Medical College, under the Board Presidency of Mr. William Potter, was changing from "proprietary" to a nonprofit sharing corporation. This meant that the full professors would have to accept fixed salaries as a measure of compensation for their teaching, and the surplus funds would thereafter accrue to the benefit of the school rather than to their personal profit. DaCosta rallied the support of the Alumni Association in favor of this change at its annual banquet in his famous speech entitled *The Professorial Jackpot.* This was the beginning of his leadership and influence in the affairs of the Alumni Association, which would later honor him in many ways.

On February 26, 1895, he married Mary Roberts Brick. Whatever the significance of the similarity might be, one cannot fail to note that the widowed Mrs. Samuel W. Gross waited for William Osler to complete his *Principles and Practice of Medicine* in 1892 before engaging in marriage, just as Mary Brick may have waited for DaCosta to complete his *Modern Surgery.* Both ladies wholeheartedly supported the continued literary efforts of their distinguished husbands through many future editions of their famous textbooks. DaCosta in 1885, during his residency at Blockley, must have come in contact with William Osler, who taught there from 1884 to 1889, but neither refers to the other in his writings. Perhaps the student-teacher relationship was premature, since Osler did not achieve his greater renown until he went to Johns Hopkins.

Rival medical schools began to offer DaCosta alluring teaching positions. In 1900 Drs. William W. Keen and John Hill Brinton, who were co-professors, agreed to DaCosta's promotion as a third full professor in order to hold him at Jefferson. DaCosta, then thirty-seven years old, had "arrived."

Middle Years

Dr. DaCosta's surgical training had been achieved in the system characteristic of those times, by working in the surgical outpatient department, by giving anesthesia and by acting as office assistant to an established surgeon. His pupil-master relationship was with the renowned Dr. W. Williams Keen (*Fig. 2*). His later accolade to Keen was "everything that, since that time, I may have gained in professional life, I owe entirely to his early aid at a critical period; to his enduring

Figure 2. Photographed in the surgical amphitheater of Jefferson Hospital in 1894. Dr. William W. Keen, with ungloved bloody hands, is seated next to Dr. William Joseph Hearn (anesthetist in Eakins's *Gross Clinic*). DaCosta stands third from left.

friendship and to his constant support."[5] In 1907, at the retirement of Keen (who became Emeritus and lived for another twenty-five years), DaCosta was the appointed successor. In 1910, with the endowment of the Samuel D. Gross Professorship by Gross's daughter, Maria Gross Horwitz, the unopposed and unanimous choice was DaCosta. He held this chair until his death.

The Wednesday afternoon surgical clinic in the amphitheater before the combined junior and senior classes was in its heyday during DaCosta's time, although this type of teaching persisted at Jefferson into the late 1950s. Its most authoritative description is that of Dr. Edward J. Klopp, a Jefferson graduate of 1906, who served as Professor of Surgery from 1931 to 1936: "He loved to teach and his hearers were impressed with his foundation in anatomy, his knowledge of surgery, his familiarity with history, his frequent quotations from literature, his inimitable manner in presenting a subject. Jack DaCosta always was at his best before a large audience. Only those who saw him before he became

incapacitated in 1922 will remember his characteristic attitude while conducting a diagnostic clinic for the students; with amphitheatre filled to capacity, the clinic floor and doorway crowded with visiting physicians, confreres, assistants and former students (*Fig. 3*). First standing to one side of the 'pit' with arm resting on the rail and one foot crossed in front of the other, then walking across the floor with body vibrating and knees bending, he spoke, giving clear, systematic, unmistakable facts, which left an indelible impression. He was the idol of the medical students. Their admiration was spontaneous. He appealed to the imagination, aroused enthusiasm, and stimulated effort."[6]

DaCosta added spice to his lectures with aphorisms and epigrams. They numbered in the hundreds and clung to the mind like burrs. A few examples will suffice:

"Sometimes a man tells the truth out of pure meanness."

"Many a man who is brooding over alleged mighty discoveries reminds me of a hen sitting on billiard balls."

"A fashionable surgeon, like a pelican, can be recognized by the size of his bill."

Figure 3. DaCosta Clinic (ca. 1912) showing old operating table in "the pit."

"The public has an idea that a consultation is a meeting of accomplices."

"There is a splendid chance to do good in surgery, especially if you don't care who gets the credit."

"To write an article of any sort is, to some extent, to reveal ourselves. Hence, even a medical article is, in a sense, something of an autobiography."

"The first patient I ever had stole my umbrella. In those days patients regarded the '9 to 1' on my sign as a notice of the odds against them."

During the early 1920s one of the Mayo brothers visited the DaCosta clinic. On being asked to stand up and make a few remarks, he said: "In the presence of the greatest teacher of surgery in the United States today, I have nothing to say," and he sat down.*

At Jefferson Hospital as Attending Surgeon, his confrere was John H. Gibbon, Sr., who succeeded Dr. John Hill Brinton as Professor of Surgery in 1907 when DaCosta succeeded Keen. The chair of surgery had split into two professorships when Samuel D. Gross resigned in 1882. DaCosta and Gibbon, Sr., worked harmoniously in tandem and resigned together in 1931, when Thomas A. Shallow and Edward J. Klopp became their respective successors.

DaCosta served for many years as Surgeon to the Philadelphia General Hospital and later as Consultant to St. Joseph's and Misericordia Hospitals. In the operating room he exhibited a thorough knowledge of practical anatomy and sound surgical judgment. It should be recalled that surgery of that era would be considered elementary by today's standards. Anesthesia was usually by open drop ether, administered by nurses, interns or office assistants, with the surgeon in total command as "captain of the ship." Blood transfusions, fluid and electrolyte replacement and antibiotics were a generation away. Peritonitis was the great bugbear of abdominal surgery. Primary anastomosis after colon resection was prohibitive. Gastroenterostomy was his most complicated stomach operation, and he never performed a gastrectomy. Mastectomy, herniorrhaphy, colostomy, hysterectomy, oophorectomy, cholecystectomy, appendectomy, and amputations were the

*Personal communication from Benjamin F. Haskill, M.D., Jefferson Medical College Class of 1923.

common major operations (*Fig. 4*). It must also be remembered that DaCosta was blind in his right eye. His handling of tissues was somewhat rough, and his well-chosen assistants often came to his rescue if bleeding became excessive. Despite all this, DaCosta's reputation as a surgeon was never but highly respected. With the onset and increase of arthritis in the early 1920s his assistant, Dr. Thomas A. Shallow, became DaCosta's "hands."

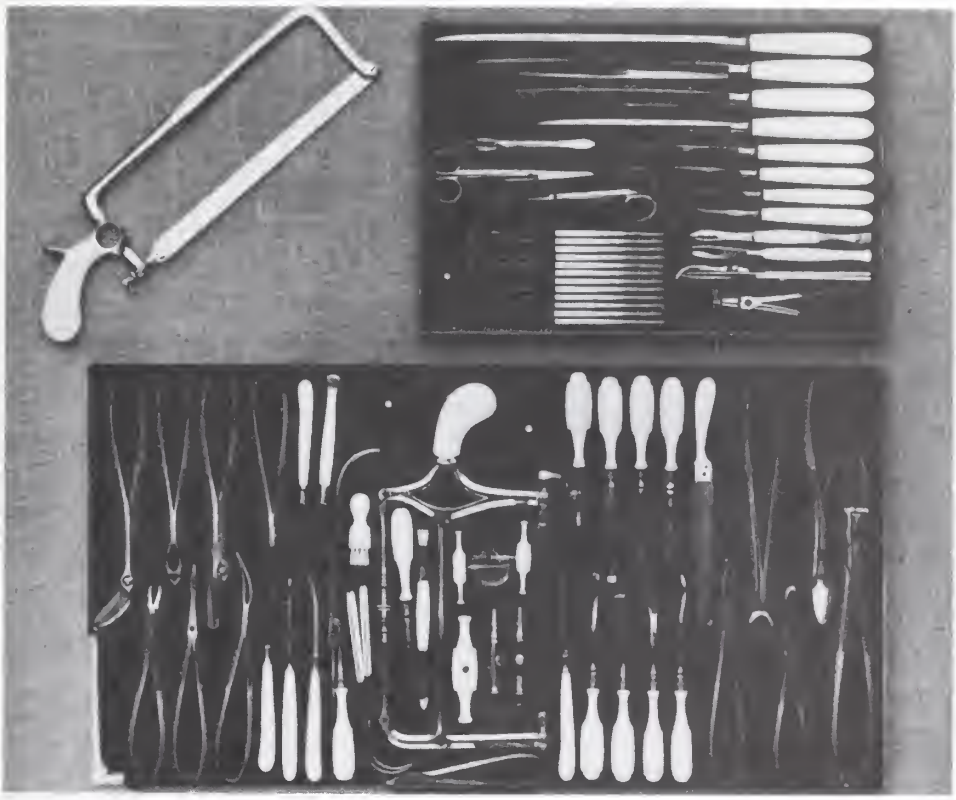

Figure 4. DaCosta's surgical instruments.

As an author, DaCosta's magnum opus was *Modern Surgery,* which went through ten editions between 1894 and 1931. It was a standard textbook in medical schools throughout the United States. He edited an English version of *Zuckerkandl's Operative Surgery* (1898), *Gray's Anatomy* (1905), as well as articles in J. C. Wilson's *Applied Therapeutics,* Hobart A. Hare's *American System of Therapeutics,* Keating's *Encyclopedia of Children's Diseases,* and Wood's *Reference Hand*

Figure 5. DaCosta in his Fire Chief uniform.

Book. His scientific interests were broadly based into such diverse subjects as osteitis deformans, tumors of the broad ligament, polypharmacy, medical ethics and medical activities of the Navy. His early experiences in neuropsychiatry led to articles on surgical treatment of epilepsy, the diagnosis of postoperative insanity, concussion of the brain, suicide, and even the surgery of idiocy and insanity.

In 1903 DaCosta wrote an article on *The Effects of the Inhalation of Smoke and of Irritating and Poisonous Gases by Firemen.* This was an expression of the intense interest he maintained throughout life in fires and firemen. For about thirty-five years he was surgeon to the Firemen's Pension Fund, in which capacity he served without salary. Until the time of his death he had an extension of the city fire alarm system installed in his home. Its bell signaled all of the first alarms and many of the local calls that were sent out from the central station. Wearing his badge, he would attend all the fires he could, riding with his friend, Chief Baxter, on the horse-drawn apparatus (*Fig. 5*). Following Baxter's death, DaCosta continued riding to many of the larger fires with Deputy Chief Waters. Extinguishing the fires fascinated him, but his purpose was to render immediate care to any

injured firemen, identical to that given to his private patients. His acquaintances included men and officers of fire departments as far away as New York, Atlantic City and Baltimore. While a young man he used to drop by the fire station at 21st and Market streets or 16th and Sansom to read poetry of his own composition or frequently that of his favorite, Robert Burns.

In May 1931 at one of his Wednesday clinics, DaCosta in his wheelchair was made an Honorary Deputy Chief of the Philadelphia Fire Department, a distinction not previously held by anyone (*Fig. 6*). He was presented with a beautiful diamond-studded badge of office and was sworn in by Director of Public Safety Lemuel B. Schofield in the presence of Chief Ross B. Davis and Fire Captain Edwin M. Fair. In

Figure 6. DaCosta (in wheelchair) on being appointed Honorary Deputy Fire Chief.

1951 the badge was presented to Jefferson Medical College by Mrs. Thomas B. K. Ringe, one of Mrs. DaCosta's nieces and the newly elected president of the Women's Board of the Hospital. In this ceremony the badge was accepted for the institution by Dr. Thomas A. Shallow, the successor to Dr. DaCosta.[7] It is greatly admired in Jefferson's archival treasure trove.

Another hobby that DaCosta carried through life was the locomotive. It was his proud boast that he could drive a shifting engine in the Camden yards. His home contained many large photographs of famous locomotives. In 1903 he sponsored a free course at the Jefferson Medical College in first aid training to the employees of the railroads entering Philadelphia, so that all trainmen could be able to render assistance to those wounded in wrecks.[8] The railroad officials were pleased with the suggestion, and the Hospital arranged for a course of illustrated lectures. DaCosta used the railroads in an unusual manner to grade the final examinations in surgery. He would purchase a railroad mileage book of 1,000 miles at two cents a mile for $20. He would then continue on a long train ride until all the papers were graded.[9] He also used the trains to host fishing parties for his surgical staff and friends at Spidel's Hotel in Atlantic City. It is said that in his final days he often wished for just one more trip to Atlantic City by train.

In DaCosta's earlier years his interest in neuropsychiatry, coupled with the necessity to augment his income, led to his appointment as surgeon to the Eastern Penitentiary. This put him in contact with many inmates, some of whom he felt could be rehabilitated by financial and physical aid. An outstanding example was his encounter with "Split-the-wind" Dunlop, a notorious burglar and safecracker. DaCosta took the risk when the culprit had served his prison term to arrange for a change in his name, provide lodging in his own household, and secure employment for him as a diener in the anatomy department at Jefferson. He became proficient in preparing specimens and was well liked. When he became seriously ill in 1910, DaCosta arranged a private room for him in the hospital and the best of care. One of his visitors was a detective who recognized him and gave the story to the *North American,* a Philadelphia newspaper. DaCosta responded in his defense and argued that kindness had helped him find the straight and narrow path. He also paid for his burial, in which banks of flowers were sent by his Jefferson friends.

Another example of DaCosta's soft and sympathetic nature, often belied by his austere demeanor, was his affection for his handyman, Willie Barrett. This black man was sometimes fired at the end of the day for the poor performance of a chore. A smile would appear on Willie's face, for he knew that on reporting to work the following morning he would receive an extra dollar. Willie eventually died of coronary thrombosis in the comforting arms of DaCosta, who refused a postmortem examination because "Willie would not like it."

The prominence of DaCosta in his profession led to membership in many societies, although he was not a "joiner" in the ordinary sense of the word. He was loyal and active, however, in whatever organization he espoused. These included the American Surgical Association, the Society of Clinical Surgery, the International Surgical Society, the American College of Surgeons (of which he was Vice-President in 1928–29), the American Philosophical Society, the College of Physicians of Philadelphia, the Philadelphia Academy of Surgery, the Philadelphia Neurological Society, the Pathological Society of Philadelphia, the Philadelphia County Medical Society, the American Medical Association, the U.S. Naval Reserve and Honorary Fellow of the Society of Surgery of Bucharest, Rumania.

DaCosta could have been a professor of English literature or of history in almost any college in the country. His *Selections from the Papers and Speeches of John Chalmers DaCosta, M.D., LL.D.* (1931), dedicated to Dr. Harvey Cushing, are replete with scholarly articles and speeches in these fields, and they are put down with style, pungent and precise. Their range and scholarship reveal a voracious and encyclopedic mind declaring itself in historical sketches, biography, political jeremiads, critiques of medical trends and reflections on social dilemmas. His essay on suicide is as pertinent today as on the day he wrote it in 1910. His *Personal Side of Pepys* showed "the lousy, noisy, merry, amorous, drunken London of the Restoration." *Medical Paris During the Reign of Louis Philippe* revealed the France of that period as "the laboratory of civilization in which experiments were made in art, literature, science, government and vice; and Paris was a crucible in this laboratory, gleaming with incandescence." He had read all the works of Dickens and could quote some sections from memory. His *Dickens's Doctors,* delivered before the Philobiblon Club of Philadelphia in 1903, disclosed the low esteem in which the great novelist held the medical profession. DaCosta concluded, "What a pity that he

never delineated such a lion-heart as Abernethy's, such a lordly soul as Hunter's, such a noble career as Paget's, or such a helpful life as Gross's. The world will always be the poorer because he did not."[10]

One of DaCosta's more tangible acts relating to the appreciation of his alma mater's heritage was his resurrection of the "old operating table" *(Fig. 3)*. Made in the early 1850s and depicted by Eakins in the famous *Gross Clinic* painting of 1875, it had served in the upper lecture room of the old Tenth Street Medical College and then in the "pit" of the 1877 Hospital. It had been used for anatomy and obstetrical lectures and for the surgical operative clinics. Sometime around 1916 DaCosta wondered what had happened to this venerable piece of furniture. It was found in the basement, being used to hold oil cans and waste material. Under his stimulus the Class of 1916 had it repaired and attached a commemorative plate at one end. The Class of 1917 added a plaque at the other. It was displayed in the library of the 1928 College building for many years and again went into storage. In 1982 it was once more restored and resides in a specially constructed alcove of the Samuel D. Gross Conference Room in the College. DaCosta's article on *Facts Concerning the Old Operating Table* is a classic.[11]

At the outbreak of World War I DaCosta served as a Junior Lieutenant in the Navy and became promoted to the rank of Commander. In 1919 he sailed on the *George Washington* under Admiral Gleaves on a special mission to care for the ailing President Woodrow Wilson while negotiations of the peace treaty and League of Nations were conducted.

Later Years

In 1922, at the age of fifty-nine, DaCosta became afflicted with rheumatoid arthritis, which progressed relentlessly. With characteristic tenacity and courage he continued to teach, give speeches, write articles and edit his *Modern Surgery*. Two poles placed beneath his wheelchair permitted his transport out of the house to a waiting automobile. Drs. Thomas Shallow, Harvey Righter and Henry Seelaus formed a team to ensure his safe passage to and from his Wednesday clinic, which usually commanded standing room only. His first letter of resignation to the Board of Trustees in 1929 was refused, but was finally accepted in 1931 when he agreed to oversee the running of his Department by Drs. Shallow and Klopp. During these years he re-

ceived many visits from his staff, Admiral Gleaves, officers of the fire department and friends. He suffered constant pain throughout these last miserable eleven years.

Despite his deteriorating physical condition, DaCosta's mind remained active and he received many honors. In 1923 the students' Yearbook was dedicated to him for the second time (the first was in 1906). The Class of 1924 had his portrait painted, depicting him teaching from his wheelchair in the amphitheater; this started the yearly tradition in which each class presented the portrait of a favorite professor to the College. The Class of 1902 also presented DaCosta's portrait in 1929, and the Alumni Association commissioned two others. All four portraits are prominently displayed within the institution. The Class of 1926 presented him with a gold-headed cane inscribed with his name as the first Samuel D. Gross professor. At its fiftieth reunion in 1976 the same class endowed a fund in perpetuity to add the name of each succeeding Gross professor on a separate gold plate (six to date). He received the Strittmatter Award of the Philadelphia County Medical Society in 1926. The Jefferson Alumni Association in May 1927 erected a tablet that recorded the gift of $100,000 as a memorial in his honor to the establishment of a Department of Experimental Medicine in the new (1928) Medical College building.

On April 30, 1930, "The DaCosta Surgical Night" was held under the auspices of the Philadelphia County Medical Society to establish the DaCosta Foundation for postgraduate education of members of the Society. Scientific papers were read by Drs. John B. Deaver, Rudolph Matas and Walter E. Dandy. DaCosta himself gave the second annual oration the following year in a farewell address to the Society. He spoke from his wheelchair with an attendant to hand him the pages and wipe his brow. In *The Philadelphia Record* it was reported that "An audience of about 1,000 physicians and their wives alternately shouted with glee and wept as the aged and broken surgeon and teacher denounced and applauded the things he had found good and bad in his profession and in mankind generally."

In his library where he had spent the final years of his life, the end came at about 3:00 P.M. on May 16, 1933. Mrs. DaCosta had provided to the end the devotion with which she had understood and supported him in every endeavor. They had no children. He was buried in Woodlands Cemetery, lot 265, section K *(Fig. 7)*.

Figure 7. Obelisk over DaCosta's grave site in Woodlands Cemetery.

Mrs. DaCosta was thirty-four years of age at the time of their marriage, two years older than her husband. Yet she survived him by eighteen years and died in 1951 at the age of ninety. She was a founding member of the Board of Lady Managers, precursor of what later became the Women's Board of the Hospital, but maintained throughout life a low profile in its activities. The many visitors to the DaCosta household were customarily ushered from the front door to the doctor's library by a black domestic. Few people came to know Mrs. DaCosta, since the doctor entertained socially during his physically active years outside the home. Jefferson students regarded their revered professor as a bachelor or perhaps a widower. It is evident that Mrs. DaCosta led a selfless life that allowed her husband to come and

go as he pleased, giving him time for his academic pursuits and providing for his every creature comfort.

In 1944 Dr. Frederick E. Keller, a Jefferson graduate in the Class of 1917, published *The Trials and Triumphs of the Surgeon,* which contained twenty-one more of DaCosta's essays and speeches.[12] In 1979 a new conference room in the Jefferson Medical College was named in his memory and contains one of his portraits.

Few people realized that DaCosta wrote poetry. A collection of twenty-seven poems dedicated to his wife was published posthumously in 1942. It is fitting to quote a few lines.[13]

> Give up the play of idle priestly canting,
> Go out among mankind with loaf and cup,
> Without a thought of praying or of chanting,
> Give food and drink and raise the fallen up.

In everything DaCosta did one can trace passion and a sense of wonder. In his love poems and historical essays the gifted romantic reveals himself — the prodigy talented with imagination and strong hands. The impulses that moved him were summed up in recent weeks by Dr. Robert Williams, an astronomer observing a new exploding star in the southern skies: "We couldn't conduct modern astronomy without these wonderful instruments. But without the romance, most of us would never have been attracted to this wonderful science in the first place. Just look at that beautiful supernova up there. Isn't that enough to make you glad you're alive?"[14]

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Medical Care of the Disenfranchised

WILLIAM B. WALSH

When asked how I was going to handle the problem implicit in the title provided me as the subject of my remarks, I wondered about it myself. I went to the dictionary to see what "franchise" meant. I went to many dictionaries and found many, many definitions; I felt we had to know what "franchise" meant before we could know what "disenfranchised" meant. Of all the definitions I found, there were two that struck me. One was that when you are franchised to do something, you are generally conducting a public service or a public mission under a grant or privilege from the government. The second was that if you are franchised, you are relieved of burdens and responsibilities and obviously would be a recipient of government largess. When we think of the medical care situation, needless to say, it's no great mystery to find that certain segments of our population, although relieved of the burdens of caring for themselves, may actually not be cared for.

But before I get into that question, I thought that it would be interesting to think more in terms of the first definition for just a few moments. The individuals who are becoming the most rapidly disenfranchised, those who are losing their privilege of doing things for the public good with the greatest skill, are you in the medical profession. I think that you are the most disenfranchised people we have in our country today, in a sense. The changes in medical practice that have occurred, particularly in this decade, were precipitated by circumstances that most of us at first laughed at. I didn't, because as Chairman of the President's Health Advisory Committee, I urged some of those changes, not knowing really what was going to happen, but wondering. And that was that we encouraged the competitive atmosphere to be introduced into medicine as the means of reducing inflation in health care, reducing health care costs because of the way in which they were outstripping inflation, and so on. Most of my colleagues in medicine have felt that they were always in competition, as individuals or groups, with one another, that their success in medicine depended on their giving quality of service, and if their quality was better than the

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other fellow's, so be it. They gave better care and they received more fruitful reward, but I think that most physicians did not anticipate that the spirit of competition would change the practice of medicine so rapidly. It has caused almost a revolution in the practice of medicine.

I am sure that you have heard from other speakers in this series, and some of you may have heard me say, here or in other places, that we are now in the era of managed health care. It is going to become more managed as the years go on, and the people who are being managed the most are the physicians. Needless to say, the entire health industry is the most heavily regulated industry of all, but the physicians are gradually being put into a position in which they have lost their franchise to give medical care in the way we have traditionally given it. We have shifted, as you know, from implicit financing of medical care to explicit financing, where corporations, managers of HMOs, insurance companies and the like are dictating the way in which we may practice. They dictate it in various ways. The government does its share by regulation; but while the government is blamed profusely for overregulation, we have not noticed that it is the private sector that has imposed the greatest amount of change through the business of managed health care. Even hospitals have been forced into managed health care by the DRG system. Now, by the attempts of perhaps applying DRG to physicians' fees, the government may be pushed into a potential compromise I think will be disastrous by trying to take hospital-based radiologists, anesthesiologists, and pathologists into the DRG system. It's a step backward in quality care. It's a step backward in many more directions, and it is questionable whether it will have any significant impact on cost. But in regulation, in cutting our health care cost bill, we urged the private sector, the insurers and the corporations to take more interest in how they were spending their money and thus immediately prevented cost subsidization of the poor by those who were better off and who were insured. Physicians did not have to give the type of free care, if you will, for charity patients that many of us gave when we were younger men or women in practice.

As time went on we became more heavily insured, and we must remember how this started. Health insurance really got its biggest boost from what we used to call the doctors' own plans, Blue Shield and Blue Cross, which I tried to get thrown out of the District of Columbia in 1950 and lost by one vote of the Medical Society. I would

like to believe that if I had won that vote, history would have been changed in health care financing, but that's a delusion. Nevertheless, it started with that. As soon as more than 50 percent of the doctors were participating in any Blue Cross/Blue Shield plan, the Blue Shield and Blue Cross people stopped asking the doctors what they thought and started telling the doctors what to think. I believe a lot of us forget that that's when the trouble started, and the commercial insurers got on the bandwagon. But now in this decade, where the corporations have come in, have pushed for explicit financing and have said to the hospitals, to the doctors, "We are not going to pay for anything except the protection that we purchase, and this means that you are not going to get extra premium dollars in the insurance policy that the employer pays for — and after all, he pays for close to 80 percent of the health insurance in this country. We are no longer going to pay for society's problems with those dollars and then be damned for raising health care costs."

So how did we react as physicians? Very passively, really. We didn't care, as long as we got paid, and I don't say that critically — I say it merely factually. It seemed that everything was going to be fine; but then we found that, as the HMO concept spread, and the PPO concept spread, and the IPA concept spread, more and more we were going into cut-rate medicine — we were going into medicine where, if we gave less care, we made more profit. At least we were being stimulated to do that. We were going into all types of contract medicine, and our entire approach, in fulfilling what the definition called a public service or a public good by a grant of the government, gradually became distorted. The managers of the plans are doing that. The corporate executives are doing it. The insurance companies are doing it. The insurance companies have gone into the HMO and PPO business. Corporations have gone into selling insurance, but they all have one thing in common — gradually increasing restrictions on the initiative and ability of the physician to do what he thinks best. Hospitals under DRGs, I don't have to tell you, are suggesting when you should send a patient home. Readmit him if you like with a different diagnosis, but we have to protect the hospital and we have to demonstrate that we are trying to cut costs.

All of this has disenfranchised the physician, and I don't see it stopping. It's very sad because now I think most of us will concede that quality of care is starting to be affected. Quality of research is

starting to be affected because research so often is being restricted to those projects that will reduce costs. If something looks very good but will not reduce costs, nobody wants to invest in it any more because it's possible that the planning commission of the state, the city, or somewhere else will say, "No, no, you can't have that because it's too expensive, and we don't think it will reduce costs," and there's little thought as to whether it will increase the quality of care. Physicians, I think, are at the crossroads today as to whether they are to remain in a managed medical care mode, which I feel we must, and yet demand a far greater voice in that management. I hope we will see that the majority of HMOs and PPOs and the others will be run by physicians with standards established by physicians and with patients assured not only access but quality. Once you start to give up on the quality of medical care you deliver, you become little more than a small businessman, and you are no different from a small businessman if you are not in the position to give the best possible care of which you are capable.

So with that I am going to leave the disenfranchisement of the physician because I think it is happening. It is the care of the poor and the others that we will address very briefly now. Actually, with all the federal assistance to health care and all the managed health care and the state-supported and state and community participation in health care, despite the fact that unemployment has dropped by more than 3 percent, the numbers of people in this country who are without any protection from health insurance or who, for one reason or another, fall through the safety net on Medicaid, or who are uninsurable, have increased to a level that now exceeds 30 million people. We cannot tell whose numbers to believe. They go from 30 million to 38 million, depending on to whom you want to listen or how they have added up the numbers.

This is unfortunate because we must understand that 75 percent of those people are working and are working most of the time, or at least enough of every year to qualify for insurance; however, for a variety of reasons they don't purchase it. Most of these people are in a critical age group for the future of our country. They are between eighteen and twenty-four. A full third of them are under eighteen and have no health insurance whatsoever, even though they are employed. With all the interference that has gone on in medical practice, these people do not categorically qualify as poor and yet they cannot afford health

insurance. Where are they all? They are working for small, unincorporated businesses, most of which offer no health insurance. There has been a shift from manufacturing to service industries, and service industries are much less likely to offer health insurance to their employees. By law, there are no incentives in these small businesses to provide employees with health insurance. Why? Because of another inequity the Congress persistently overlooks, and that is that unincorporated businesses or small businesses with less than a certain number of employees are not entitled to deduct their health insurance from their taxes up front if they buy it themselves, nor is it deductible from the company if they are unincorporated. So many of our businesses are unincorporated. It's unbelievable, and yet in the last six years the great growth in this country in new businesses has been in small businesses. Congress is aware of it. It requires legislation to give them equality. Most of us have health insurance, or most of the people who are carrying health insurance have it as a tax-free benefit from the employer. The employer gives it as a tax-free write-off in his business, and that takes care of 80 percent of the population, but here we have 30 million people who are being treated totally unequally because they don't work, say, for General Electric or some other large corporation, and thus are not eligible to receive health insurance without having it count as income. A substantial number of these people are in the $15,000–$20,000 a year bracket. Not a great deal of money, and therefore it's almost impossible for them to afford even the most basic Blue Cross or Blue Shield plan, which is much too expensive for them as individuals. Also, they have no incentive to buy it because they cannot deduct it from their taxes as a tax expenditure if they do choose to buy it. So they take the chance that they will present themselves to the local public hospital or to the local university hospital, both of which bear an unfair burden of this kind of patient, and they count on the fact that they will not be turned away. More and more, however, they are being turned away or shunted from one place to another.

We have urged our center for health affairs to consider these people. We have urged that the President address this situation in his State of the Union address when he urges the private sector and the states, because the burden here is primarily on the states and their own insurance laws, to permit these uninsured people to receive some incentive for getting health insurance and their employers to provide it. A certain percentage of them are unemployed part of the year. The

average man or woman without a job is unemployed only about four months. Many of the major corporations carry this insurance voluntarily so that some of them do have insurance to fall back on. But this is becoming unpopular because the individual who is between jobs and has a lot of time on his hands is proving to be very expensive, because when he has nothing else to do but think about his body, he decides that this is when he is going to get all his medical care done — his elective surgery, his everything that he can think of until he gets back on his feet and starts working again. Therefore, many companies are taking a second look. There is movement by some of the more liberal members of the Congress to mandate insurance to take care of these people, both the employed and those temporarily unemployed, but this has a down side because the very company that is laying people off is laying them off because the company is not making any profit and its business is suffering. A mandate is going to add a burden to these companies that will perhaps prevent them from reemploying personnel, primarily because they are already steeped in overhead with this mandate adding to it. In addition, of course, it will add to inflation because you will pay for it with everything bought. So the mandate does not seem to be the answer.

For this group, we think the answer is tax incentive. In other words, giving the employer a tax write-off to buy the insurance, not having the employee be taxed for it as income and, for small businesses, developing mutual employment trusts so they can get a group rate and get their coverage at a lower level in order to at least get access to medical care. This can be done. It can be done at the state level better than at the national level. We do feel that the President should address such groups as the Governors' Conference and try to urge these people to take appropriate steps within their states and to recognize that, while this would cost revenue as a tax expenditure, the revenue that the government would lose would really be minimal. It's already losing 40 billion dollars a year for the 80 percent of us who are privileged to be taken care of with tax-exempt income for health care, so why not give it to the others? The most it would add would be a few billion more dollars, which, in a trillion-dollar budget, is lost — but lost for a good purpose.

You then also have the poor unemployed, and there are millions of those who have fallen through the safety net. Under Medicaid, I think most of us don't realize that, if you are not categorically eligible —

meaning that if you are not on welfare — you can't really collect on Medicaid or be eligible for Medicaid. The Medicaid program is tied into the welfare program, and until it is separated from the welfare program, you are never going to have an equitable distribution of care or access for care to the poor who no longer can get it. There are currently 2 to 3 million people in this category. You have to be a single parent with children. This is preposterous. If there are two parents in the house and, you know I hate to tell you this (this is my administration), but here is an administration that prattles about the family all the time and still, for six years, has done nothing about that regulation: that if there are two people in the house, two parents, you are not eligible. It's ridiculous! It doesn't take any great imagination to correct this type of legislative oversight and make these people eligible and to expand Medicaid.

Here is another answer. Every politician in Washington, be he Democrat or Republican, shudders when you use the words, "income testing," "means testing," whatever phrase you want to use. This, to them, seems to mean political suicide. Yet, here you have people who are just above the poverty level who are not eligible, who could be income tested and, for a pittance, buy into the Medicaid program in lieu of insurance. Make no one eligible who is already insured, or has other insurance available to him. Who can live today on $2500 as a family of four and pay for medical care or insurance? So there has to be some action taken for these people; and the action will have to be, in this instance, led by the federal government but agreed to by the states. I think that this can be done.

Then you have a third group of disenfranchised, and those are the medically uninsurable. They comprise about 1 or 2 percent of that 30 million, and they are people who, because of either congenital abnormalities or whatever (a variety of types of things that fit into this category) are medically uninsurable. The only way that you can solve this problem, and there are differences of opinion, is by risk pooling in which no one company has to bear the greatest loss. They will have to be subsidized at a state level because, for the private sector to take this group on, you will almost have to charge 150 percent premium — in other words, 50 percent over the base premium — to insure this group. They, I think, could be covered by risk pooling so that no one company takes the risk of becoming the favorite bad risk company and goes bankrupt.

These are the three large groups, and what is most irritating to us who are interested in it is that all these problems are solvable. You could touch on many other aspects of relative disenfranchisement. The long-term care of patients, the ones both young and old who run out of coverage, become partially disenfranchised, the catastrophic illness situation that is under consideration now. But the legislation that has been recommended, when all the excitement of the so-called battle between minds in the cabinet dies down, affects less than 3 percent of the elderly, and the coverage is so restrictive as to be kind of silly. It pays for no drugs, it pays for no dental care, it pays for nothing other than acute in-patient hospital care. It doesn't help the long-term result — and the catastrophe for most of us is not the first two weeks. The catastrophe is the five years *after* the first two weeks.

I have suggested some changes or some combination whereby we can involve the private sector in a broader base of coverage and package them together, find a packaging mechanism to put the acute catastrophic illness with the government daring it, but together with longer-term coverage from the private sector, the risk can be minimized that way, and I think that there will be some experimental programs by some large companies with their retired personnel in this area. But if we rush emotionally into catastrophic care coverage because it's politically practical, we can immediately destroy the initiative of the private sector. Hard as it may sound, I have to wonder at the wisdom of whether we should move ahead right away or whether we should be a little more patient and try to get some packaging done to make it a more realistic relief program. But we have to find a way to cover catastrophe for the young, which is even more important because they don't have any coverage at all in many instances. The long-term care of that group is another matter. We don't think about them as being disenfranchised, but they are.

So, here we have my thoughts, for whatever they're worth, on disenfranchisement and the care of the disenfranchised, and I go back to my original premise, that there are no easy answers, but the prime mover and the prime responsibility rests on us as a profession if we continue to accept management from without, if we continue to accept standards imposed from without as passively as we have. I don't mean buying newspaper ads and so on. That's the best way to offend a politician and lose your case. You don't do that. You simply talk to them. I'm sure there are men and women in this room who have

congressmen as patients or friends, who have governors and mayors as patients and as friends. This is the way you bring about change. It's the way (I hate to indulge in any nostalgia) but this is the way we used to do it. We didn't go in for mass propaganda in one thing or another, but rather reached a few people who took an interest and who went and carried the ball for us when we needed government intervention or when we wanted a lack of it. I can't emphasize enough that accessibility to these people is one thing. The assurance of the quality of care is another. We cannot promise that poor people will have the same quality of care as those more affluent; we never have in our profession. But we can still give good, quality care, and the burden should be borne by all of society.

So I ask you at least to refranchise yourselves and lead the parade to take care of others who are disenfranchised.

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The reader will perceive that the habit of understatement is not only the essence of good breeding, but also a tool of great value in the hands of a writer.

Virginia Woolf. *Granite & Rainbow,* p. 184. A Harvest Book, Harcourt Brace Jovanovich: New York and London, 1958.

On the other hand, when I rewrite anything I entirely revolutionize it, sometimes with no improvement at all, because I only lose the freshness of the original and am just as prolix over again, but in a different and duller way. It is hopeless for me to write without the heat of some new ideas.

Thomas Merton. *The Sign of Jonas,* p. 159. Image Books, Doubleday & Co.: Garden City, New York, 1956.

Insanity: Evolution of a Medicolegal Concept

ROBERT L. SADOFF

Introduction

The concept of insanity has been confusing to many because of its medical origin and its current legal application. Historically, the term was adopted by physicians to denote mental illness. Indeed, in the nineteenth century hospitals for the mentally ill were referred to as institutions for the insane. The American Psychiatric Association began in 1844 as The Association of Medical Superintendents of American Institutions for the Insane. *The American Journal of Psychiatry* was formerly called *The American Journal of Insanity.* Nineteenth-century medical texts and treatises refer to the mentally ill as the insane.

Legally, those of unsound mind were referred to as mad folk or lunatics rather than the insane. It was not until this century that medicine abandoned the use of the word "insane" when referring to the mentally ill. At the present time the law has adopted the concept of insanity primarily in criminal cases to refer to those people who lack criminal responsibility because of their mental illness that prevents them from knowing what they are doing or from knowing that what they are doing is wrong. It is the development of this limited use of the word "insanity" that will be discussed from the historical point of view in order to obtain both medical and legal perspectives.

Medical History of Insanity

It may be appropriate to begin with the Father of American Psychiatry, Benjamin Rush, a Philadelphian. His classic 1812 treatise, *Medical Inquiries and Observations Upon Diseases of the Mind,*[1] described forms of insanity that Rush believed had their seat in the blood vessels of the brain. He wrote on the derangements of the passion and derangement of the will, but in this book he did not apply these concepts of insanity to medical jurisprudence. In his 1811 treatise, *Sixteen Introductory Lectures to Courses Upon the Institutes*

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and Practice of Medicine,[2] Rush called his lecture #16, delivered on November 5, 1810, "On the Study of Medical Jurisprudence." He wrote, "The subject I have chosen for this purpose is those states of mind which should incapacitate a man to dispose of his property, to bear witness in a court of justice, and exempt him from punishment for the commission of what are called crimes by the laws of our country." He referred to intellectual derangement, which consists of a departure from ordinary habits of thought, speech and, in certain cases, of conduct that arises from three causes:[3]

1. An acute inflammation of the brain called phrenitis or phrensy.
2. Chronic inflammation of the brain called mania or madness. In both these cases the alienation of mind is an original or what is commonly called an idiopathic disease.
3. What is called a delirium, a symptom only of a general disease of the blood vessels, or some part of the body connected by sympathy with the brain.

Rush distinguished delirium from madness and believed that when delirium is confused with madness, it is done in such a manner as to pervert truth and justice. Briefly, his distinctions included the idea that delirium is attended with remissions in which the mind suddenly recovers its natural and healthy state, and that there is generally the absence of muscular action, whereas, in madness there is often great muscular excitement.

1. In delirium, the eyes are the principal channels of false perception to the mind. In madness, the ears principally deceive the patient; hence the reason why they so often talk to themselves.
2. The appetite is suspended in delirium. This is rarely the case in madness.
3. Scarcely anything is remembered of what passes in delirium. Nearly everything is remembered of what passes in the second or moderate grades of madness after recovery from it.[4]

Rush also wrote of lucid intervals in delirium, which must be differentiated from madness. He also noted the morbid state of the will and cited the following circumstances that he observed in persons who commit murder or rather, take away life, under the influence of the morbid state of the will:[5]

1. The act is committed without provocation or malice, either of a sudden, or of a chronic, nature.
2. It is usually committed upon near relations and friends and often by persons of the most exemplary moral and religious character.

3. It is sometimes committed on a child or an idiot in order to provoke death by the law.
4. It has been committed by parents upon their children under the pressure of extreme poverty in order to prevent their suffering from the same evil.
5. It is sometimes committed by persons under the influence of delusive opinions in religion.
6. Circumstances of greater and more deliberate cruelty are attended rather than common murders.
7. It is never accompanied by robbery.
8. It is sometimes followed by suicide or by attempts to maim their own bodies.
9. It is never or rarely succeeded by an attempt to escape. The persons who perpetrated it generally confess what they have done and sometimes not only surrender themselves up to justice, but demand its utmost rigor.

Some of the early writers in medicine relating to insanity were British and came primarily from the major lunatic asylums such as Hanwell, from which Ellis[6] and Conolly[7] emerge. James Cowles Prichard, in his *Treatise on Insanity and Other Disorders Affecting the Mind,* described in 1835 melancholia, which he called monomania or partial insanity.[8] He noted that these cases are different from those of mania or raving madness, in which the mind is totally deranged and the individual affected talks nonsense or expresses himself wildly and absurdly on every subject. He stated that there are cases in which the intellectual or rational powers are not affected by the illness, but the injury is to the feelings, temper or habits. In this connection he notes that the "moral and active principles of the mind are strangely perverted and depraved. The power of self-government is lost or greatly impaired and the individual is found to be incapable of conducting himself with decency and propriety in the business of life." Prichard described moral insanity as madness consisting of a morbid perversion of the natural feelings, affections, inclinations, temper, habits, moral dispositions and natural impulses, with any remarkable disorder or defect of the intellect or knowing and reasoning faculties, and particularly without any insane illusion or hallucination. The three modifications of this disease are:

1. Monomania or partial insanity in which the understanding is partially disordered or under the influence of some particular illusion while the intellectual powers appear to be unimpaired.
2. Mania or raving madness in which the understanding is generally deranged. The reasoning faculty is confused and disturbed in its exercise. The mind is in a state of morbid excitement and the individual talks

absurdly on every subject to which his thoughts are momentarily directed.
3. Incoherence or dementia.

Prichard most clearly developed the concept of moral insanity, referring to Esquirol, who declared, "This moral alienation is so constant that it appears to me to be the proper characteristics of mental derangement. There are madmen in whom it is difficult to discover any trace of hallucination, but there are none in whom the passions and moral affections are not disordered, perverted or destroyed."[9]

Following in the tradition of Esquirol and Prichard, the Father of American Forensic Psychiatry, Isaac Ray, in his classic 1838 book, *A Treatise on the Medical Jurisprudence of Insanity*,[10] supported the notion of moral insanity. He wrote of mania, intellectual mania, which is partial or general, and of moral mania and described irresistible, motiveless impulses to destroy life. Ray also reported lucid intervals, simulated insanity and the legal consequences of epilepsy.

Historically, medical writers and legal scholars influenced each other's thinking. For example, in the legal history of the development of the insanity concept in criminal cases, perhaps the most outstanding case that affected medicolegal thinking prior to McNaughten was the Hadfield case of 1800.[11] In that case attention was directed to the existence of delusions as the center of Hadfield's legal problem. Erskine (his apologist) successfully argued for Hadfield's insanity by disclaiming the need for total alienation of mental abilities as noted by Coke in the eighteenth century.[12] Although Ray disapproved of Erskine's conclusions, he was influenced by the Hadfield case. Similarly, the McNaughten case was tried in 1843,[13] five years after Ray's book was published in Boston and four years after its publication in Edinburgh and London. According to Quen, Alexander Cockburn, defense attorney for McNaughten, "relied primarily on 'A Treatise on the Medical Jurisprudence of Insanity' " by Isaac Ray for the rationale of his defense strategy.[14]

Ray did significantly influence Chief Justice Charles Doe of the New Hampshire Supreme Court, who promulgated the New Hampshire doctrine after the cases of Pike[15] and Jones[16] in 1869 and 1871 that subsequently fostered the Durham test in the District of Columbia, as written by Judge David Bazelon in 1954.[17] It is important to note the cross-fertilization of influence by psychiatrists and lawyers and judges in the development of the concept of insanity or lack of criminal responsibility.

Legal History of Insanity

Briefly, the history of legal application of mental status to criminal responsibility in Anglo-American law may begin about the twelfth or thirteenth century with Bracton, a Roman cleric and judge who declared that a person would not be held responsible for his criminal behavior if he had "no more reason than an infant, a brute or a wild beast."[18] It was Bracton who noted the difference between those who may enjoy lucid intervals and those who may have perpetual madness.

Subsequently, Edward Coke[19] noted along with Hale that no felony or murder can be committed without a felonious intent or purpose. "If a person was so deprived of reason that he resembled a beast rather than a man he could have no felonious intent and, therefore, could not be convicted of a crime." Coke recognized four examples of non compos mentis:

1. The idiot or fool natural.
2. He who was of good and sound memory and by the visitation of God has lost it.
3. A lunatic who sometimes has his reason and sometimes not.
4. He who is rendered non compos mentis by his own act as a drunkard.

Toward the end of the seventeenth century, Sir Matthew Hale,[20] in his classic *Pleas of the Crown*, commented on insanity and its status in criminal law: "It is very difficult to determine the invisible line that divides perfect and partial insanity; but it must rest upon circumstances duly to be weighed and considered both by judge and jury, lest on the one side there should be a kind of inhumanity towards the defects in human nature; and on the other side, too great an indulgence given to great crimes." The best measure that he thought of and presented was this: "Such a person as laboring under melancholy distempers hath yet ordinarily as great understanding as the child of 14 years hath, is such a person as may be guilty of treason or felony." Hale also distinguished between partial and total insanity.[21]

By partial insanity, Hale seemed to refer to persons who appear deluded only in respect of one subject but sane in other matters. Hale, like Coke, regarded insanity as a disturbance of reason and intellect and also as a disturbance of will; it was clear that in order to be excused for one's offense, the disturbance had to be of such severity that the person had less understanding than a fourteen-year-old.

One of the early important cases, known as Arnold's case,[22] occurred at Kingston Assizes in 1724. Arnold was arraigned for attempting to murder Lord Onslow. Arnold had shot at and wounded the peer under the influence of the delusional belief that Lord Onslow was responsible for all the disturbances that took place in the country. In summing up the defense of insanity, Mr. Justice Tracey said: "It is not every kind of frantic humour or something unaccountable in a man's actions that points him out to be such a madman as is exempted from punishment: it must be a man that is totally deprived of his understanding and memory, and doth not know what he is doing no more than an infant, than a brute, or a wild beast. Such a one is never the object of punishment."[23] On this basis, the jury found Arnold to be guilty, and he was sentenced to death, although, at Lord Onslow's personal request, his sentence was commuted to life imprisonment.

That case helps set the stage for the Hadfield case of 1800.[24] Hadfield shot at King George III on Drury Lane in London in 1800. This case is notable for Erskine's beautiful defense. He was able to relate Hadfield's offense to his insane belief that the accused was required to sacrifice his life in order to save the world. As he did not wish to commit the sin of suicide, he believed that he had to carry out an act for which he would be hanged or executed by the state without harming himself or others.

In his arguments Erskine described the head injury that Hadfield sustained during war. He also described Hadfield's delusions and hallucinations as well as his behavior as observed by his friends and relatives during the day of his assault on the King. In commenting on Coke's and Hale's conclusions that total insanity was needed for exculpation in criminal cases, Erskine stated, "If total deprivation of memory was intended by these great lawyers to be taken in the literal sense of the words: if it was meant that, to protect a man from punishment, he must be in such a state of prostrated intellect as not to know his name, nor his condition, nor his relation toward others . . . then no such madness ever existed in the world. It is idiocy alone which places a man in this helpless condition."[25]

Erskine considered the nature of delusions in his argument that Hadfield should be acquitted by reason of insanity. He said, "Their conclusions (i.e., the victims of delusional beliefs) are just and frequently profound: the premises from which they reason, when within the range of the malady, are uniformly false:—not false from any defect

of knowledge of judgment; but, because a delusive image, the inseparable companion of real insanity, is thrust upon the subjugated understanding, incapable of resistance, becomes unconscious of attack. Delusion, therefore, where there is no frenzy or raving madness, is the true character of insanity."[26] Thus was born the delusion test, which remained in effect as the basis for exculpation by reason of insanity until after the McNaughten case forty-three years later. This is true except for the Bellingham case in which Mansfield, C.J., would not allow the delusion test in 1812.[27]

On the basis of this reasoning of delusion test and the clear evidence of Hadfield's insanity at the time of his assault, Lord Kenyon, C.J., stopped the trial and declared: "With regard to the law, as has been laid down there can be no doubt upon earth; to be sure, if a man is in a deranged state of mind at the time, he is not criminally answerable for his acts; but the material part of the case is whether at the very time when the act was committed, this man's mind was sane."[28]

At the same time as Hadfield's acquittal by reason of insanity, the Parliament in England passed the Criminal Lunatics Act of 1800 regulating the disposal of persons found insane on arraignment who were not guilty of the offense on the grounds of insanity.[29] Prior to this act, persons found not guilty by reason of insanity were either cared for by their relatives or were set free. Under Section II of the act, the court was empowered to order such a person to be kept in strict custody until such time as Her Majesty's pleasure was known.

Consider next the case of Bellingham.[30] In 1812 Bellingham was tried, sentenced and executed within a week of his action despite the evidence of his paranoid and deluded state. Sir James Mansfield, C.J., directed the jury that in order to establish insanity as a defense, they had to consider whether the prisoner "had sufficient understanding to distinguish good from evil, right from wrong and that murder was a crime not only against the law of God, but against the law of his country."[31] That concept has lived to the present time, and it will be seen in current cases that it is not sufficient for a person to be acquitted if he believes that what he is doing is right according to the will of God in a delusion with hallucinations, but if he knows that it is against the law of the United States or of the particular state in which he is charged, he may be found guilty of that act.

We come to the Oxford case of 1840.[32] It is not clear why Oxford, age eighteen, discharged two pistols at Queen Victoria and her Prince

Consort. Oxford was arraigned for attempting to shoot the queen. At his trial there was sufficient evidence to show that he was deluded, and he was found insane by the jury. He was sentenced to live in an asylum at the queen's pleasure. In this case Lord Denman, C.J., advised the jury that "a person may commit a criminal act and not be responsible. If some contributory disease was, in truth, the acting power within him which he could not resist, he would not be responsible."[33] This may be the beginning of the concept of the irresistible impulse that began to manifest itself in state laws about 1887 and became the law in about seventeen states.[34]

Perhaps the most famous of all cases dealing with insanity, named the McNaughten, occurred in 1843.[35] At that time Daniel McNaughten was living in Glasgow and believed himself to be persecuted by the Tory Party. He was accused of killing Edward Drummond, secretary to Sir Robert Peel, prime minister of England and head of the Tory Party, who had changed coaches with Drummond while traveling through Scotland. McNaughten was charged with the killing and, in an eloquent defense, his attorney, Mr. Cockburn, traced the course of McNaughten's delusional beliefs and related them to the crime. It was clear that McNaughten had suffered from paranoid delusions, and he was acquitted by reason of insanity. Cockburn described the doctrine of partial insanity promulgated by Esquirol under the concept of monomania and also described Ray's concept of moral insanity that should not apply in this case because McNaughten was delusional.

Following his acquittal, McNaughten was sent to Bedlam at the queen's pleasure. According to Quen, "A strong angry reaction from the public ensued. The House of Lords asked the 15 judges of the Queen's Bench to answer five questions in order to clarify the law regarding insanity 'to operate in all time, for the guidance of the courts of justice and to direct, with more force than is attained by the influence of a single judge, the verdicts of justice.' . . . of the 15 judges, one dissented and the other 14 spoke through Lord Chief Justice Tindal who presided at McNaughten's trial. Their answers were advisory only and did not have the force of law. . . . The second and third questions were answered with what is generally known as the McNaughten rule, that is: . . . it must be clearly proved that at the time of the committing of the act, the party accused was labouring under such a defect of reason, from disease of the mind, as not to know the nature and quality of the act he was doing; or if he did know it, that he did not know he

was doing what was wrong."[36]

Isaac Ray, in his *Treatise on the Medical Jurisprudence of Insanity,* wrote convincingly about Hale's opinions: "In the time of this ancient jurist, insanity was a much less frequent disease than it is now, and the popular notions concerning it were derived from the observations of those wretched inmates of the madhouses whom chains and stripes, cold and filth, had reduced to the stupidity of the idiot or exasperated to the fury of the demon. Those nice shades of the disease in which the mind, without being wholly driven from its propriety, pertinaciously clings to some absurd delusion, were either regarded as something very different from real madness or were too far removed from the common gaze . . . to enter much into the general idea entertained of madness."[37] Thus, the work of Pinel[38] and Conolly[39] and others who removed the chains of many inmates from the early madhouses also changed the public view of the mentally ill.

Following the McNaughten case, there arose some modifications in adjudicating criminal insanity, notably in 1869[40] and 1871[41] under the influence of Isaac Ray and the so-called Doe-Ray correspondence between Ray and Chief Justice Charles Doe of the New Hampshire Supreme Court. The New Hampshire doctrine indicated that a person would not be found criminally responsible for his acts if at the time of the act he was suffering from such mental illness that his behavior was an offspring of his mental illness. That rule continues in effect today in New Hampshire. In addition it was the antecedent of the Durham test promulgated by Judge David Bazelon in the District of Columbia in 1954.[42] The Durham test states that a person would not be held criminally responsible if at the time of the crime he was suffering from such mental illness that his behavior was a product of his mental illness. That test remained in effect, with modifications, for eighteen years until it was replaced in 1972 in the Brawner decision by the American Law Institute Model Penal Code.[43]

The Model Penal Code was developed by the American Law Institute, and its criminal responsibility aspect emerged in the early 1960s.[44] This is a test that not only incorporated the cognitive aspects of McNaughten and the volitional aspects of the irresistible impulse test that appeared formally in 1887 and continues to the present time but included as well the conative or emotional aspects of mental functioning. The ALI Model Penal Code appeared to integrate the three basic functions of personality rather than limit the test to the cognitive

aspect as did the McNaughten test of 1843. The ALI Model Penal Code stated clearly that a person would be held not criminally responsible for his act if at the time of the act he suffered from mental illness to the extent that he lacked substantial capacity either to conform his conduct to the requirements of law or lacked substantial capacity to appreciate the criminality or wrongfulness of his behavior.[45]

This test was accepted in the District of Columbia and in every Federal jurisdiction in the United States.[46] It was adopted by the state of Maryland and applied in the well-known case of Arthur Bremer.* Bremer shot Governor Wallace of Alabama, paralyzing him from the waist down. When Bremer was tried in Maryland, two noted psychiatrists testified on opposite sides of that case: one, that Arthur Bremer lacked substantial capacity to conform his conduct because of his mental illness when he shot Wallace; another (for the prosecution), that Bremer lacked capacity to conform his conduct but not substantial capacity. Thus, the test hinged on the interpretation of the word "substantial."

The trial of John W. Hinckley, Jr., is sometimes considered the "McNaughten case of the 20th century."[47] There are many parallels between Hinckley and McNaughten. Both were major insanity cases of their respective centuries, and each led to major reforms in the idea of insanity as a defense. Hinckley was tried under the American Law Institute Model Penal Code in the District of Columbia, where the burden of proof was on the prosecution to prove beyond a reasonable doubt that Hinckley was not insane. The jury came to a decision based on two factors: One was the means by which the psychiatric testimony was presented both by defense and by prosecution. The defense called four experts, all of whom said that Hinckley was mentally ill and, therefore, insane. The prosecution, with its burden of proof beyond a reasonable doubt, produced two expert witness psychiatrists who said that Hinckley was not mentally ill but had some minor personality disorders and, therefore, was not insane. Two psychiatrists who had examined Hinckley for the prosecution were not called to the witness stand; both were prepared to state that Hinckley was mentally ill but not insane under the ALI test.† That testimony may have given the

*Personal communication from Jonas R. Rappeport, M.D.

†Personal communication from Jonas R. Rappeport, M.D., and James Cavanaugh, M.D.

jury a clearer distinction between the concept of mental illness and the concept of legal insanity. That is the fulcrum of the following discussion.

Modifications in Insanity

Since Hinckley, there have been major changes in the insanity defense in this country. Three states have chosen to abolish the insanity defense and maintain only a *mens rea* concept,[48] a Latin phrase for guilty intent. A crime consists of two elements: the act and the intent. If the intent is vitiated—i.e., the defendant was not able to form the specific intent to commit the crime in question—he may be acquitted, but not by reason of insanity. These are specific intent crimes, that require the ability to form the intent as well as commit the act.

Other states have maintained the insanity defense but have added a second category of guilt known as "guilty but mentally ill." Pennsylvania and twelve other states have currently adopted the concept of guilty but mentally ill as an alternative to (but not a replacement for) the verdict of not guilty by reason of insanity.[49] It is significant to note that the definition of mentally ill in Pennsylvania in Act 171 that adopts the guilty but mentally ill doctrine is different from the definition of mentally ill as noted in the Mental Health Procedures Act of 1976, Act 143.[50] The definition of mental illness in Act 171 is equivalent to that of the ALI Model Penal Code for insanity,[51] whereas the definition in Act 143 refers to a person who has a diagnosis of mental illness and who as a result of that diagnosis poses a threat of harm to himself or to others.[52] The major reason for the adoption of guilty but mentally ill is primarily to provide treatment for those people who commit violent crimes and who are seriously mentally ill, but not to the extent of being insane. These individuals are allowed to obtain treatment prior to imprisonment. The major difference between those people who are found guilty but mentally ill and those found not guilty by reason of insanity is the disposition of the individual following treatment. When those found guilty but mentally ill complete their treatment in the hospital, they are not discharged into the community as those who are found not guilty by reason of insanity, but rather complete their sentence in a correctional institution.

One of the major changes affecting the insanity defense occurred in the Federal jurisdiction. In 1984 the Federal law was changed with the adoption of the Omnibus Crime Code.[53] In that code, there is a

change in the insanity defense indicating that the standard or test for insanity is that a person would not be criminally responsible for his behavior (no mention of insanity is made) if he were suffering from mental illness at the time of the act, such that he could not appreciate the nature and quality of his act or the criminality of his behavior.

Both the American Psychiatric Association and the American Bar Association seem to agree on the changes that were needed following Hinckley.[54,55] Both agreed that the volitional arm should be removed, and both agreed that insanity should remain as a viable part of the criminal law. The ABA approved in principle a defense of non-responsibility for crime that focuses solely on whether the defendant, as a result of mental disease or defect, is unable to appreciate the wrongfulness of his conduct at the time of the offense.[54] The APA quoted from Matthew Hale in his *History of the Pleas of the Crown,* published posthumously in 1736, that the insanity defense was rooted in the fundamental moral assumptions of the criminal law: "Man is naturally endowed with these two great faculties, understanding and liberty of will. . . .The consent of the will is that which renders human actions either commendable or culpable. . . . It follows that where there is a total defect of the understanding, there is no free act of the will."[55] Thus, the APA states that it is a long-standing premise of the criminal law that unless a defendant intentionally chooses to commit a crime, he is not morally blameworthy and he should not be punished.[56]

The American Psychiatric Association supported the retention of the insanity defense in some form and went on record as being against the concept of guilty but mentally ill. The APA notes that the guilty but mentally ill plea may cause important moral, legal, psychiatric and pragmatic problems. The APA recommends the test for insanity as follows: "A person charged with a criminal offense should be found not guilty by reason of insanity if it is shown that as a result of mental disease or mental retardation he was unable to appreciate the wrongfulness of his conduct at the time of the offense."[57]

Role of the Psychiatrist in Insanity Cases

The role of the psychiatrist in insanity cases has varied in different jurisdictions. The most recent finding in the Omnibus Crime Code for the United States is that psychiatrists may not testify to the ultimate question, but the role of the psychiatrist in criminal cases has been supported and encouraged by the Supreme Court of the United States.

In separate cases the Supreme Court noted in *Ake* v. *Oklahoma*[58] that indigent defendants facing felony charges have a right to independent psychiatric examinations at the state's expense. The court also noted in the case of *Barefoot* v. *Estelle,*[59] that psychiatrists may testify to the hypothetical question in sentencing cases where dangerousness is an issue to sentencing even if the psychiatrist has not examined the defendant.

A psychiatrist may be called either as a friend of the court by the prosecution or by defense attorney to examine the defendant for competency to stand trial and for criminal responsibility at the time of the act. Competency involves an examination for present state of mind, but evaluation for criminal responsibility presumes a different kind of total examination. Here the examination focuses on a person's state of mind at a previous time; this cannot be done solely on the basis of a clinical examination. What is needed is an investigation into the person's state of mind at that previous time by reading police investigation reports, statements the defendant may have made at or around the time in question, and prior medical reports, if they exist, of his state of mind before this occurred and subsequent to its occurrence. If he was hospitalized after the act, what were the findings of the psychiatrists who examined him shortly thereafter? Family members may be interviewed as well as friends or neighbors who had access to his state of mind and his behavior at or around the time of this occurrence.

Perhaps there may have been some memory loss or distortion by the defendant about his behavior with respect to this particular act. In these cases it may be important to conduct special testing to determine whether or not there was a *bona fide* amnesia.[60] A battery of psychological testing is also helpful in such cases to determine character strengths and weaknesses, personality patterns and presence or absence of organic brain dysfunction.

One of the problems for psychiatrists examining defendants for criminal responsibility is the application of medical principles to legal tests. Psychiatrists are not trained in residency programs or in medical schools about the concept of wrongfulness or "nature and quality." These are learned through experience and by working in a number of criminal cases. The major help that a psychiatrist can give in these matters is to describe the mental state and allow the courts or the jury to come to the decision about the ultimate question of insanity. In

that regard, the modification of the new Omnibus Crime Code for the United States is valid. Many cases involving insanity reveal an agreement by psychiatrists on both sides regarding diagnosis and treatment, but disagreements on the application of the diagnosis to the legal test involved.

Many treatises have been written on the insanity defense and on the Hinckley trial. One of the most recent is by the Foundation Press, published by three professors of law at the University of Virginia.[61] The authors note that those who work in the field of criminal law and those who work in the field of mental health have difficulty communicating with each other. Perhaps the most important reason for this difficulty is that the two disciplines have different, and sometimes incompatible, objectives. The authors, in discussing the validity of the insanity defense, further note: "Proponents of an insanity defense indicate that criminal punishment is inappropriate unless the defendant can be blamed for the offense. They also note that moral disapproval of conduct is based on certain premises about the capacities of people to exercise choices over how to behave. They argue that since mental illness can profoundly affect one's capacity to exercise rational choices, a defense must be afforded in cases where, due to mental illness, the defendant is unable to exercise normal choices about how to behave."[62] They also note that critics state that the criminal law "has a strong moral underpinning, focusing on whether a person can justly be blamed for criminal behavior. But they point out that criminal law has other goals as well, most prominently goals of prevention and public protection. The criminal process is designed not merely to punish persons who have committed a crime, but also to deter potential criminals and to incapacitate those who pose a danger to the public. The insanity defense may well be thought to compromise these goals."[63]

The insanity defense has never really served to reduce the deterrence effect on others who may kill for reasons beyond their control or for those who believe that they can kill and get away with it if they plead insanity. As far as the protection of society, there are very clear rules about what to do with people who are found not guilty by reason of insanity. They do not walk the streets, for the most part, and they are confined, not to Bedlam or the prisons where they don't belong, but to institutions of treatment where they will receive proper therapy and rehabilitation until they are ready to take their place in the community again.

Critics of the insanity test have noted that "the insanity defense rests on an uncertain scientific foundation. The causal factors linking body, mind and behavior are still poorly understood. The problem is compounded by the fact that many of the operating assumptions of psychiatrists, psychologists and other professionals who study and treat mental and emotional problems are not subject to empirical assessment or validation. . . .The clinical study of the human psyche is largely a therapeutic discipline with its concerns for diagnosis and cure. The criminal law, on the other hand, is focused in large part on blame and responsibility, issues that lie beyond the objectives and expertise of psychiatry, psychology and related disciplines."[64]

These arguments may be valid for general psychiatry and for psychiatrists who lack the experience of working within the criminal legal system. However, a specialized group of forensic psychiatrists within the American Academy of Psychiatry and the Law and those who have recently been board certified by the American Board of Forensic Psychiatry may perform in a manner that traditional psychiatry has not heretofore accomplished. Forensic psychiatry is that subspecialty of psychiatry that deals precisely with the issues of mind and body in relation to morals and philosophy and the criminal law.

Conclusions

Historically, insanity has evolved from a medical concept to its current status as a legal term meaning "lack of criminal responsibility." Many changes have occurred in the evolution and development of the test for insanity. These changes have been influenced jointly by both medical and legal writers reflecting on the changes in diagnosis, treatment and criminal behavior. As psychiatrists have sharpened their diagnostic techniques and treatment facilities, the notion of mental illness has broadened from the earlier view of the chained madman to the delusional schizophrenic and, finally, to the current broad-based concepts described in DSM-III.[65] Likewise, the legal concept of insanity or lack of criminal responsibility has undergone similar modifications and changes. The earlier notion of the wild brute test or total lack of mental ability had been modified to a partial lack of mental ability under the influence of Erskine and Isaac Ray. The medically influenced delusion test of 1800 gave way in 1843 to the legally influenced cognitive test after McNaughten's acquittal. Volitional tests, including irresistible impulse and the ALI Model Penal Code, found their way

into criminal law until the acquittal of John W. Hinckley, Jr., after which a number of modifications occurred. Currently the Federal law excludes the volitional test but has retained the conative and cognitive aspects of mental functioning.

At present the Supreme Court of the United States has encouraged psychiatric participation in criminal cases, especially in the Ake decision,[66] but Federal law has prohibited the psychiatrist from testifying to the ultimate question in insanity cases. I am in support of the modification to prohibit psychiatrists from giving opinions on the ultimate question of insanity. Nowhere in his training has the psychiatrist learned how to apply medical and psychiatric concepts to philosophical and legal conclusions as noted in the insanity tests. The psychiatrist is best able to present clinical data to the jury or the judge for determination of criminal responsibility. By eliminating the ultimate question from psychiatric testimony, we may be able to eliminate the impact of the so-called "battle of the experts." Psychiatrists do differ in their conclusions about diagnosis and treatment and most certainly will differ on conclusions that go beyond medical and psychiatric expertise. By eliminating the psychiatric testimony on the ultimate question, the psychiatrist need not concern himself with definitions of "nature and quality" or "wrongfulness" or "criminality." He may confine his testimony to the strength of his discipline in the clinical area and communicate effectively with judge or jury about the nature of the defendant's mental illness and its effect on the criminal behavior charged. The jury or the judge will then determine whether that mental illness was sufficient to exculpate the defendant from criminal responsibility.

In state cases, however, where the psychiatrist is allowed and expected to testify to the ultimate question, the McNaughten concepts with the addition of the conative function as embodied in the Omnibus Crime Code[67] appear to be a satisfactory test for criminal responsibility. It should be noted that in most cases where insanity is raised (and that appears to be in a minority of criminal cases), the psychiatrists for both defense and prosecution often agree on whether the defendant is or is not insane. It is only in the relatively few cases in which the psychiatrists do not agree where the case comes to court and to public attention.

The final lesson from this long discourse on the evolution of the medicolegal concept of insanity that is clear is this: Whereas insanity

had been, until this century, the label for the mentally ill in our communities, it is used at the present time almost exclusively to indicate a lack of criminal responsibility according to a particular test within each jurisdiction. Mental illness and insanity must not be confused. They are not interchangeable. Insanity refers to a particular state of mind at a particular time with reference to a particular act and is precise and limited. It does not involve a person's ability to tell the difference between right and wrong. That is a major philosophical question.

There is much to learn and much to teach. Mental health professionals must learn more about the workings of the human mind with reference to violent behavior and to murder in all respects. They must be able to teach concepts effectively and appropriately to each other and, when called on, to the triers of fact in criminal cases. They must communicate effectively what is known to juries and to courts so that mental health experts may continue to be an important factor in the execution of justice where mental illness is concerned.

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Victor Robinson, M.D. (1886–1947): A Centennial Tribute to a Pioneer Medical Historian

FRED B. ROGERS

This year we celebrate the birth centennial of Victor Robinson, a pioneer American medical historian who achieved international reputation in his field of scholarship. One of his friends, Dr. Ralph H. Major, professor of medicine at the University of Kansas, briefly summarized Dr. Robinson's career as follows:

> Victor Robinson was born in the Ukraine on August 16, 1886, and, when a child, was brought to the United States. He studied law at New York University but, finding it uncongenial, turned to pharmacy and received the degree of Ph.C. from Columbia University in 1911. From pharmacy, he turned to medicine, receiving his doctor's degree from the Chicago College of Medicine and Surgery (now Loyola University Medical School) in 1917. On his return to New York, he soon gave up the practice of medicine and devoted himself entirely to the study of medical history.
>
> Robinson's *Pathfinders in Medicine,* which first appeared in 1912, was quite successful and was followed by subsequent works, some thirteen in all. In 1920, he founded *Medical Life,* the first, and for many years the only, monthly journal written in English devoted to the history of medicine. This periodical awakened a slumbering interest in medical history among wide circles of the medical profession. (It ceased publication in 1938.) A chair of the history of medicine was created for Robinson in 1929 at Temple University in Philadelphia. He did much to stimulate interest in medical history . . . and wrote easily and well; his *Story of Medicine* (1931), while written largely for the laity, has been called by competent critics one of the best one-volume histories of medicine ever published.[1]

Robinson displayed a great empathy for past figures and events, and his notable accomplishments in a relatively short life revealed a genius at work. He was a founding member of the History of Science Society (1924) and the American Association for the History of Medicine (1925). In 1932, on one of his many trips abroad, he photographed and recorded archeological sites of medico-historical interest in Crete, Greece and Italy. The following year he spoke to the Section on Medical History of the College of Physicians of Philadelphia, reviewing that journey. His talk, "In Quest of Aesculapius," was illustrated by

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Figure 1. Victor Robinson lecturing. (*The 1941 SKULL,* p. 140)

lantern slides of original photographs.[2] In 1933 he also broadcast a series of radio talks on medical history in New York City.

My friendship with Victor Robinson began when I was a student at Temple University School of Medicine. Having read his *Story of Medicine,* which had been reissued in an expanded edition in 1943, I looked forward keenly to meeting him. Our first-year class enjoyed his spirited lectures, which covered the following topics:

I. Primitive Medicine — origin of trephination, bloodletting, and therapeutics.
II. Egyptian and other ancient forms of medicine.
III. Greek Medicine, including Alexandrian and Roman.
IV. Arabian Medicine in the Middle Ages.
V. Medieval Medicine — cessation of the Experimental Method.
VI. Medicine in the Renaissance — reawakening of the Experimental Method.
VII. The Quest for Human Anatomical Material for Dissection.
VIII. Anatomy and Physiology in the Seventeenth Century.
IX. Medical Leaders and Chemists of the Eighteenth Century.
X. Pathfinders in Medicine in the Nineteenth Century.

XI. Landmarks in American Medicine.
XII. Art, Satire and Caricature in Medicine.[3]

In teaching, Dr. Robinson often leaned across the lecture rostrum (*Fig. 1*), hands clasped, or paced the platform in a rectangular pattern as his informative talk bubbled out without notes and accompanied by numerous lantern slides. His "wake up and listen" style caught and held interest, and his descriptive mastery of the language was engaging. A witty phrase or dash of erotica came forth at times, aimed at keeping the back row of the class awake. The professor asked questions of his audience, answered questions and recommended various books and articles, many of which he had donated to the medical school library. A special bookplate was provided for the collection. He encouraged his students and colleagues by editing and publishing their writings. Each year he invited his history classes at Temple to call on him at home, individually and in groups. Those fortunate visitors saw his vast library and shared his enthusiasm for broad culture, literature and history. Dr. Albert J. Finestone, now Associate Dean at Temple Medical, told me that when he stopped by, he met another guest, Dr. Henry E. Sigerist, and took home a book that he admired *as a gift.*

In 1930, when the redbrick building in which he taught was constructed, Dr. Robinson was asked to list the names of ten pathfinders in medicine for inscription on the lintels above the street-level windows. The names chosen were Hippocrates, Galen, Vesalius, Paré, Harvey, Sydenham, Jenner, McDowell, Pasteur and Roentgen. Robinson purposely left two blanks across the building front, saying that he hoped one or more of his acquaintances would grace those spaces. (As testimony of his own stature, Robinson's *Pathfinders in Medicine* and *Story of Medicine* are listed in the *Garrison-Morton Medical Bibliography,* several of his books adorn the White House Library in Washington, D.C., and his lantern-slide collection and other memorabilia are now in the National Library of Medicine at Bethesda, Maryland.)

In 1948, Dr. William Egbert Robertson, longtime Temple chief of internal medicine, recalling the professorial invitation that had been extended to Victor Robinson twenty years earlier, wrote the following account:

> It has long seemed to me more than a matter solely of interest, but rather a duty to inform the student of the steps by which the outstanding

Figure 2. Newly appointed faculty members of Temple University School of Medicine, 1929. Front row: left to right: Temple S. Fay (neurosurgery), Nathaniel W. Winkleman (neurology), Chevalier Jackson (laryngology and bronchoesophagology), Charles E. Beury (president, Temple University), William N. Parkinson (dean, medical school). Second row: left to right; Thomas Klein (internal medicine), Matthew S. Ersner (otorhinology), Alfred E. Livingston (pharmacology), William C. Pritchard (anatomy), Victor Robinson (history of medicine).

> men of medicine mounted to the higher plane they came to occupy. This, perhaps, is more strictly true of the eponymic diseases . . . and signs and syndromes coupled with the name of an investigator. All possess an added charm when read in the original, or, when a description is joined with a brief reference to the man whose name has so often become indissolubly associated with the condition.
>
> It was with the hope of stimulating such an interest, that, as Professor of Medicine at Temple University, I asked Dr. Victor Robinson to accept the chair of Medical History at that institution, thus giving more time to an important aspect of medicine than is possible to the chair of Medicine. By inculcating a higher respect for medicine and all that it implies, the subject is ennobled, dignified, and, though a few only may be inspired to pursue their work more seriously, it cannot be denied that the general influence must be beneficent. Dr. Robinson has left a lasting impression, and contributed to a higher grade of scholarship.[4]

Professor Robinson was welcomed by the students, and the following year the Class of 1930 honored him thus in its *SKULL* yearbook:

> Temple is indeed fortunate in obtaining the services of this talented gentleman, who has transformed a formerly dry course into one of exceeding interest. The fact that the students no longer care to cut History of Medicine is proof of his ability as a lecturer. He takes available facts and clothes them with a beautiful raiment, with the result that his lectures border on the poetic. The man is a dreamer, a poet and a word painter,

> and every figure of speech seems to be selected with the definite purpose of giving his listeners the richest, fullest meaning of the idea possible. Being possessed with a really marvelous memory, it is not hard to believe that this man must have been a remarkable student.[5]

Dr. Robinson returned the compliment with a poem, published in the same volume, titled "The Physician's Prayer." It carried a message of humility and hope:

> Without hauteur of the braggart's tongue, nor with an assumption of superiority over others, but as students seeking the truth, and as men sobered by the part we play in the drama of life-and-death, conscious of our limitations, rejoicing in what we have achieved throughout the ages, grateful for the many discoveries of modern times, with a vision of what is yet to be, let us press forward to the work that lies before us in the long road to our dream of a diseaseless future.[6]

Again in 1931 Robinson contributed a page to the *SKULL*. He wrote in part as follows:

> Philadelphia, which in its colonial days founded the first medical school in this country (1765), has also established one of the latest. Although the School of Medicine of Temple University was cradled in the twentieth century (1901), it has already seen much history during the passing generation. . . .
>
> It is a privilege to occupy the first Chair of the History of Medicine in Temple University School of Medicine, and I desire to put down in your official annual what I have already told you in person. . . . It is both my belief and sincere wish that every one of you will walk worthily in the footsteps of Hippocrates, nor can I deny myself the hope that among your number there may be some whose future achievements will be recorded by the historians of medicine.[7]

The 1941 *SKULL* recorded the following glowing notice:

> "The first cry of pain through the primitive jungle was the first call for a physician." These words started the refreshing lectures by Dr. Victor Robinson. We learned to recognize the unlabeled urinal; were flattered because mothers forbid their daughters to go within two blocks of the Medical School in Padua; were astounded that Pharaoh's daughter, by laboring in the world's oldest profession, was able to build a second pyramid after having paid for the first; felt impelled to hiss the licentious Greek villains who, while creating thousands of mutilated dead, refused the physician permission to investigate the human body.
>
> We were whisked through the centuries of healing with all the speed that eloquence can give, but our inspiring visits with Paré, Harvey, Rembrandt, Auenbrugger, Hunter, Pasteur and scores of others, will long be remembered.[8]

The year 1943 brought two medical school graduations to help meet the demand for physicians during World War II. Each yearbook brought

kudos for the course in the History of Medicine. In June 1943 we read these words:

> Once a week for the first semester of freshman year we enjoyed lectures of unvarying interest by that master story-teller, Dr. Victor Robinson. Illustrated by an exceptionally complete set of slides, this course brought to life the colorful past of the healing art.
>
> Dr. Robinson, with his pointed observations and unfailing wit, took full advantage of the human side of the story of medicine. Choice anecdotes, delivered in his unequaled style, will remain with us long after obscure, cold facts have passed into oblivion.[9]

The December 1943 *SKULL* also praised its historian-professor, as this passage reveals:

> Eloquent, vociferous Dr. Victor Robinson traces for freshmen the circuitous, devious route of medicine from the times of trephination and bloodletting to the candid present. Cheers greet the fast-talking, fast-thinking professor as he prepares to launch forth into Alexandrian lore, Egyptian medicine. Fluently, hypnotically he weaves a spell over the most pragmatic freshman, bringing the colorful past to the complacent present. The romance of medicine . . . reliving of the dawn of experimental science . . . these add richness to the sterile, exacting drabness of freshman drudge, work and fears.[10]

Professor Robinson gave a written examination at the end of his course, and each student received a pass grade on the year's report. It was jokingly said that Robinson threw each blue booklet out of the railroad train window after reading it, thereby making history from Philadelphia to New York!

The 1946 *SKULL* carried this comment: "Dr. Victor Robinson unveiled the development and growth of medicine from the stone age to the age of aviation medicine, and prepared us to be trained in the specialized science that is practiced today."[11] In the following year the *SKULL* sadly noted: "We take this occasion to add an 'In Memoriam' to Dr. Victor Robinson who passed away early in 1947. His presentation of a series of lectures on the History of Medicine will long be remembered by Temple graduates for their interest and humor."[12]

In addition to his lectures to medical students, he taught a history of nursing course to student nurses from 1937 to 1945. Students from the training schools of Temple, Episcopal, Germantown, and Jewish (now Einstein-Northern) Hospitals shared these presentations. In the introduction to his book *White Caps: The Story of Nursing* (1946), he stated that the nursing profession was a partial history of the emancipation of women. "It never occurred to the Aristotles of the

past," he said, "that it would be safer for the public welfare if nurses were educated instead of lawyers. The untrained nurse is as old as the human race; the trained nurse is a recent discovery. The distinction between the two is a short commentary on the follies and prejudices of mankind."[13]

Another of Victor Robinson's contributions was his occasional addresses to students and colleagues. In January 1936 he discussed "The History of Goitre" before the Section on Medical History of the Philadelphia College of Physicians; an abstract was recorded in its *Transactions.*[14] During the summer of 1938, with Drs. Henry Sigerist and Montague Ullman, Dr. Robinson toured the Soviet Union. Later, in December 1942, he spoke to a joint meeting of Temple University's Hammond Pre-Medical Society and the Russian War Relief Society. The *Temple University News* of December 4 reported that his talk was illustrated with photos of public health measures taken in the U.S.S.R., where he had traveled widely just before World War II. A memorial volume issued in his honor (1948) included as sponsors Philadelphians W. Wayne Babcock, E. J. G. Beardsley, Charles L. Brown, Matthew S. Ersner, Reuben Friedman, Maurice S. Jacobs, Edward B. Krumbhaar, W. B. McDaniel 2d, William N. Parkinson, William Egbert Robertson, Richard H. Shryock, and Michael G. Wohl.[15]

In the summer of 1945 Dr. Robinson developed angina pectoris, which limited his activities. He continued writing and editing, however, and his book *Victory Over Pain: A History of Anesthesia* was published in 1946 on the centennial of the first public demonstration of ether anesthesia. In November 1946 he suffered his first heart attack; a second, fatal episode followed in three months. His sister, Mrs. Ellen H. Ringer, later wrote in the *Victor Robinson Memorial Volume*: "Alas, neither good wishes, nor admiration, nor love could keep my brother Victor with us. On the eighth of January, 1947, at ten o'clock in the morning, while sitting in his library in his large comfortable chair, reading *William Henry Welch and the Heroic Age of American Medicine,* the book slipped from his hands, and, in that moment, he was gone."[16]

Several eulogies followed his passing. His friend Dr. George Rosen aptly penned these words:

> The death of Victor Robinson . . . removed from American medical history one of its leaders and pioneers. The contribution which he made to this field was unique, for it rested on a passion for history and a love

> of medical literature linked by the intensity of a poet. No one who listened to him lecture, or met and talked with him, ever forgot him. Victor Robinson's ability to bring before contemporaries the drama, the color, and the vitality of the medical past was simply a development of his sensitive appreciation of and vital interest in people. Modesty, gentleness, keen perception of humor, and ability to listen were qualities that endeared him to his friends. . . . [He was] a cultured man who was on friendly terms with the historical figures of whom he wrote.[17]

In another memoir, entitled *A Great Medical Historian,* Dr. Herman Goodman of New York City wrote:

> I first met him in 1921 . . . when he was still at 12 Mount Morris West. There Victor edited his *Medical Life* and there as best he could, he gathered periodically the few and motley devotees of medical history. . . . To the abiding glory of Victor it must be said that he more than anyone else fostered interest in medical history in America. *Medical Life* was for years the only journal in America devoted to medical history. Two hundred-fourteen numbers of it were issued. It bridged the continents and brought to us, the neophytes, acquaintance with the learned. It is thus, and not from our academic teachers, that we learned of Pagel, Neuberger, Castiglioni, Rolleston, Sudhoff, Sigerist. . . .
>
> For many years Victor Robinson toiled mostly alone, aided only at times by such erratic and delinquent "co-workers" as myself. In retrospect it is clear that he had but little recognition for his labors. True lately he was appointed Professor of Medical History at Temple University. But that was after twenty years of labor. All honor to Temple University![18]

As is apparent from these and other tributes, Robinson was a respected teacher, and numerous former medical and nursing students recall him with admiration. As examples, Dr. Nicholas P. Dallis, California psychiatrist and creator of the newspaper features *Rex Morgan, M.D.,* and *Judge Parker,* recently remembered Victor Robinson as a "spell binder" and inspiration for his work.[19] Pediatrics professor Dr. Thomas R. C. Sisson of Rutgers Medical School noted several years ago that "some alumni, of a certain age, will recall that wonderfully erudite and puckish medical historian who lectured to us weekly during freshman year."[20]

I have continued the teaching of medical history at Temple University School of Medicine, inspired by Robinson and his peers. In the past I answered numerous letters posthumously addressed to Dr. Robinson from far and wide about health matters discussed in his popular home medical adviser volumes, the last, *The New Modern Home Physician* of 1947, reissued for many years thereafter.

Ten years after the death of Dr. Robinson (1957) I wrote an appreciation of my teacher and friend for the *Temple University Medical*

Center Bulletin. To conclude it, the following words from the funeral speech of Pericles, recorded two thousand years ago by Thucydides, were applied to this pioneer medical historian:

> The whole earth is the sepulchre of famous men; and their story is not graven only on stone over the native earth, but lives on far away, without visible symbol, woven into the stuff of other men's lives.[21]

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Science and Medicine in the Social Construction of Woman: From Aristotle to the Corpus Callosum

RUTH BLEIER

The question is, Who — What — is Woman? I do not know, we do not know, we cannot yet know, because she is a cultural construct, reflecting the desires and needs and fears of Man from at least the time of Aristotle. The question Who is Man? would seem ridiculous. Educated within the liberal humanist ideologies of individual freedom and opportunity, we understand that all men are different, for better and for worse, but also that *Man* equals *Human* and *humanity,* both in historical representation and in language. Woman, then, as de Beauvoir[1] first shockingly articulated in 1953, has always been the Other, the other than Man — therefore, the other than fully human, the one not quite the same and not quite normal. And this historic inability of Man, of men, to identify with, empathize with, to *see* and *hear* woman or women as the same or equal continues to have profound social reverberations and consequences for women as well as for men and our social institutions.

In tracing the medical and scientific construction of Woman (and of gender differences) over the millennia, I shall be tracing the construction of the theme of Woman's inferiority — intellectual, artistic, physical and moral. But the construction of that theme, the reflection of Woman from the eyes and pens of learned males, has not been without dissonances. After all, had women everywhere behaved in accordance with their "natural" attributes of passivity, dependence and vacuity, there would have been no continuing need by philosophers and scientists to prove the naturalness, the biological logic, of those attributes. Ideologies serve important social functions, and the continuity and persistence of male dominance has been hardly possible without the complementary subordinance of women, a state maintained with a judicious combination of force, authority, tradition and ideology. It has been within the context of women's strivings for self-

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expression and their resistances to oppression that science and medicine have made their contributions to ideologies of female inferiority.

In addition, it is important to remember that while male philosophers, physicians and scientists were insisting on and "proving" women's natural physical and mental inferiority, they were also denying women access to any form of higher education or training and excluding them from participation in the sciences that were defining woman's nature. Women were not permitted entrance to colleges and universities in this country or Europe until a little over 100 years ago and then with strong resistances and qualifications that have barely dissipated. (Until 1865, when Vassar was founded, and the 1870s when some state universities, especially the new land-grant colleges, began to admit women, only Oberlin College accepted women as students in the United States.) Women could be educated as physicians only after they opened their own medical schools and hospitals beginning in the mid-nineteenth century (New England Female Medical College in 1848). Let us also remember that while male physicians, philosophers and scientists insisted on and tried to demonstrate women's *natural* dependence and fragility, they were enforcing that economic, political, social and intellectual dependence on fathers, husbands or brothers by physical force, by institutions, and by systems of laws that have begun to be changed only in the last two decades.

I believe that my account here will show that, from the time of Aristotle to the advent of the corpus callosum and other gender-differences obsessions of the neurosciences in the 1980s, the scientific and medical theme of women's inferiority has gained nothing in intellectual, conceptual or methodological sophistication. In fact, from Aristotle to the present moment, one can perceive a number of conceptual and methodological commonalities: (1) the argument from first principles, i.e., from unsupported (and often unsupportable) assumptions; (2) the conviction that *however* it is that woman is, that is the inferior way to be; and (3) if you can find something to measure in women and men, measure it and the results will tell you something important about their natures, with the corollary from (2) above that whatever the measurement is for women, that is the measure of inferiority. Today, in this era of civil rights and equal opportunities legislation and ideology, only the language has changed from the theme of *women's inferiority* to that of *sex differences.* This modern terminol-

ogy (sex differences research) gives the appearance of a value-free search for the *truth* about difference, leaving implicit the judgment that difference means difference from the white male norm *and, therefore, inferior.*

In what forms the subject of women's inferiority surfaced over the centuries — that is, what parts of the female body became the object of scrutiny and measurement — seems to have depended on the field of interest and expertise of the scientists and the ascendancy of particular scientific fields in different periods as well as on the particular social and political preoccupations of the times. And the degree to which this goal of defining woman's "nature" and describing the forms of her inferiority obsessed the scientific and medical mind seems to have depended on the level of contemporary social turmoil — that is, on the amount of activity by women that threatened traditional gender roles. The hope is that scientific clarity about the nature of woman (i.e., about her disabilities) will halt any attempted transgressions of the boundaries constructed around her life, around her proper roles. The effort has been — from Aristotle through the Renaissance to the eighteenth-century anatomists to the nineteenth-century physicians and brain scientists, including Broca and Vogt, to Darwin and Freud to late twentieth-century psychologists, primatologists, behavioral neuroendocrinologists, sociobiologists, and neuroscientists — to demonstrate that the way things *are* with respect to the relations between women and men and to women's subordinate social position is part of the natural order of things, based on human nature, on innate abilities and disabilities. This need to naturalize the social, economic and political order of things, to legitimize a system of unequal power and privilege, has led scholars whom we have come to view as brilliant thinkers and observers to abandon logic, scientific rigor and, in fact, their commitment to truth as they fashioned "facts" to fit their theories and beliefs of woman's inferiority and her natural position of subordination to man. Whether they really *believed* in woman's inferiority we may never know. We can reliably guess, however, that they *feared* and *resisted* her equality or, dare I speak the word, superiority.

Thus, as women agitated in the second half of the nineteenth century for the means of regulating the frequency of pregnancies as well as for higher education, theories abounded predicting insanity and permanent infirmity for those women who directed their limited stores of energy away from the womb and its natural functions and into their

brains. During the same period, as we shall see, brain scientists *proved* through cranial measurements that women's brains did not, in any case, have the capacity for higher intellectual activities.

But we will begin this story with Aristotle, who lived from 384 to 322 B.C. While Aristotle used his own and others' observations of animals extensively in his theory-making, he also relied heavily on a priori elements, on first principles. In his work *Generation of Animals,* these were important in his formulation of female and male principles, accounting for what he considered to be the obvious mental and physical differences between women and men and for women's natural inferiority. These first principles included the following: (1) the male provides the efficient cause of generation (the seed); the female provides the material; the male semen acts on the material and gives it form; (2) the male generates in another; the female, only in herself; (3) the humors characterizing the male principles are hot and dry; the female, cold and moist. It follows naturally from these, as Aristotle expresses throughout his *Generation of Animals,* that the male stands for the active and effective and the female for the passive, that the male imparts the sensitive soul and the female merely the body and that the male is thus better and more divine. Because of her inability to produce seed, Aristotle saw woman as an impotent and incomplete male (bk. 1, ch. 20). The active force in the seed produces a perfect likeness in males, while females result from a defect in the active force or the material. Aristotle's explicit definition of woman as a mutilated male also appears in *Generation of Animals* (bk. 2, ch. 3): "for just as the young of mutilated parents are sometimes born mutilated and sometimes not, so also the young born of a female are sometimes female and sometimes male instead. For the female is, as it were, a mutilated male."

Aristotle also provides us with a fine example of an intellectual technique that persists in science today — that of demonstrating that *however* it is that women are found to be, it is, by definition, the inferior way to be (with the converse true for males — however they are, it is the superior way). In *Generation of Animals* (bk 4, ch. 6), Aristotle writes (the circularity of his arguments is downright dizzying):

"In man males are more often born defective than females, but in the other animals this is not the case. The reason is that in man the male is much superior to the female in natural heat, and so the male

foetus moves about more than the female, and on account of moving is more liable to injury, for what is young is easily injured since it is weak. For this same reason also the female foetus is not perfected equally with the male in women. . . . For while within the mother the female takes longer in developing, but after birth everything is perfected [by *perfected* I believe he means comes to maturity] more quickly in females than in males; I mean, for instance, puberty, the prime of life and old age. For females are weaker and colder in nature, and we must look upon the female character as being a sort of natural deficiency. Accordingly while it is within the mother it develops slowly because of its coldness. . . ; but after birth it quickly arrives at maturity and old age on account of its weakness, for all inferior things come sooner to their perfection, and as this is true of works of art so it is of what is formed by nature."

But, then, what is truly fascinating is that Aristotle, long conceded to be a brilliant empiricist, seems to have gotten it wrong about women *even* when he could directly observe them and count and measure. He says about the sutures of the skull: "The skull has sutures: one, of circular form, in the case of women; in the case of men, as a general rule, three meeting at a point" (*Generation of Animals,* bk. 1, ch. 7). He says about the blood: "Blood in the female differs from that in the male, for . . . . the blood in the female is thicker and blacker than in the male" (*G.A.,* bk. 3, ch. 19). And he says about teeth: "Males have more teeth than females in the case of men, sheep, goats, and swine" (G.A., bk. 2, ch. 3).

Then Aristotle makes crystal clear the social and political implications, if not the predetermined goal and purpose of this compendium of female biological inferiorities, in his work *Politics,* where he discusses slavery and obedience: "Again, the male is by nature superior, and the female inferior; and the one rules, and the other is ruled; this principle, of necessity, extends to all mankind" (bk. 1, ch. 5). For these different roles, he says, man needs the courage to rule; woman, the modesty and silence to obey.[2]

In addition to Aristotle, there were other natural philosophers and physicians who developed important theoretical systems in this period and up to the second century A.D. The Hippocratic writers produced a large body of works on gynecology during the fifth and fourth centuries B.C., and these foreshadow the obsessions of nineteenth-century physicians with the uterus as the source of all disease in

women; in the writings of both periods, women are, by definition, hopelessly flawed. Hippocrates, like Aristotle recognized as a brilliant observer and medical thinker, could not think straight, could not see properly or logically when it came to women. In comparison with men, women were considered to be more porous, more full of fluids, more humid. This excess of fluid need not be pathological, however, since it can be eliminated by menstruation or diverted into healthy channels during pregnancy and lactation. But this means that to be healthy, a woman must be pregnant, lactating or regularly menstruating. If she is not, the excess fluids accumulate in the diaphragm and heart, causing disease, and after six months of stopped-up menses, the condition becomes incurable. When this occurs in young girls, they become violent, distraught and suicidal. The cure is marriage and pregnancy.[3]

These Hippocratic writings also provide frightening descriptions of the "wandering womb," a uterus that has become too dry, usually from lack of coitus, which keeps it moist. Such an unhappy uterus bumps around in the abdomen, looking for moisture and, when it hits the liver, may produce sudden suffocation. This was known, reasonably enough, as hysterical apnea. While many remedies were offered, the basic advice remained for those most commonly afflicted — namely, widows and virgins — to get married, the kind of advice women have received for the subsequent 2,000 years.

While there were other voices and views, Aristotle's importance lies in the fact that his enormous body of writings was preserved and translated into Latin in the early medieval period, when his arguments came to represent the universal truths in the medieval and early modern periods of western science and medicine.[4] Authorities such as Horowitz believe, for example, that the ascendancy of Aristotle's one-semen theory over conflicting two-semen (male *and* female seed) theories allowed the maternal contribution to conception in the form of the egg to remain unsuspected and unsought until the seventeenth century. (In 1672 de Graff made the observations that permitted him to make the correct inference that the female "testes" produce ova, though he mistook the follicle for an egg. The egg was actually discovered microscopically by von Baer in 1827.) Aristotle's definition of a female as a defective or mutilated male entered biological, medical and theological works through the *Summa Theologiae* of St. Thomas Aquinas, who wrote in the thirteenth century, in which form it con-

tinues to be influential, in Horowitz' view, to the present time. Aristotle's arguments became institutionalized within western higher education when the university system was developed in Europe with the establishment of the University of Paris in the early thirteenth century. By 1255 his works had become required reading at the University of Paris, which served as the model for the many universities that were thereafter founded across Europe. Aristotle's views spread beyond academe and into ordinary homes through street preachers and popular spurious works published under Aristotle's name.[5]

The establishment of the university system marked a shift in the site of higher education from monasteries and private homes to universities.[6] While women had sometimes been able to receive a higher education in their homes and as nuns in monasteries, they were excluded from the newly founded universities of Europe (they were not admitted to the University of Paris until 1868). They were thus isolated from the centers of significant scholarly activity at the same time as Aristotle's views on the inferiority and natural subordination of women became an integral part of scientific, medical and philosophical thinking.

Ian Maclean[7] (1980) considers the subject of woman as seen by Renaissance scientists and physicians as complex and contradictory, influenced still by Aristotle and Hippocrates, as well as Galen, who wrote in the second century A.D., but also by the growth of experimental anatomy and embryology and the writings of the sixteenth-century experimentalists, Vesalius, Fallopio and Fernel. Thus, before 1600 scientists and physicians accepted the Aristotelian and Galenic notion of the woman as imperfect male: because of a lack of heat in her generation, she is incomplete, cold and moist and unable to concoct perfect (i.e., generative) semen from her blood. The axiom persisted that hot is perfect. There were further elaborations, however, on the significance of the hot and cold difference between men and women. Male mental characteristics attributable to body heat include "courage, liberality, moral strength and honesty."[8] The female, on the other hand, shows the opposite of these features. Also, just as the seed is more noble than the earth, man is more noble and perfect than woman.

After 1600 it was recognized that both sexes are necessary for reproduction; and, as a result of Fallopio's anatomical description of the female reproductive tract, the uterus became an admired organ,

no longer viewed as simply an inverted and interior (and therefore useless) penis. Woman then ceased to be an imperfect version of the male in this regard. Also, while Renaissance writers accepted ancient authority on the humors and continued to view women as cold and moist, these features were now seen as functional, necessary for the physiological functions of menstruation, pregnancy and lactation. While scientists and physicians thus abandoned the view of women as physically and physiologically imperfect, they retained their beliefs of women as psychologically or mentally imperfect males *because* of their cold, moist humors, menstruation and the uterus with its proneness to disease. Because of these features, women may have a more retentive memory and greater imagination and be more compassionate and attentive, but they are also more jealous, querulous, despondent, false, deceptive, passive and inconstant. The uterus weakens rationality and induces hate, vengeance, fear, and anger as well as pity and love. The softer flesh predisposes to psychological softness.[9]

I am skipping rather lightly through the Renaissance, but I recognize that it would be of great relevance and interest to analyze these changing nuances in the medical-scientific construction of women's physical and mental attributes within the context of the dramatic changes that were occurring in this period of transition from feudalism to capitalism: changing economic and social relationships between women and men and women's changing relationships to work, property, the family, the state and sexuality. In addition, the seventeenth century saw the emergence of the bourgeoisie and of liberal ideology. While Locke (1632–1704) challenged the absolutist rule of patriarchy, or father-right, as the basis for political rule by the *state* in order to establish the liberal concept of individual freedom, it was freedom for the individual *man* and he saw no need to abolish patriarchal relations in the family.[10] As later stated, "Liberal ideology dislodges the privilege of birth and replaces it, not with egalitarianism, but with equality of opportunity in the marketplace, for men only. The ascribed status of womanhood is left intact."[11] In fact, woman's subjection to man was reinforced in bourgeois terms, through the relations of property and inheritance. Women were relegated to the private sphere by liberal patriarchal ideology, where she had no title to money or right to litigation. In the face of these changes, it seems to me that a great deal of ideological work, in which science and medicine would play a role, would have been required to reconcile the glaring contradiction be-

tween the liberal concept of individual freedom and the new and continuing restrictions on women's freedoms.

It was during this period of the early seventeenth century and developing capitalism that Francis Bacon influentially helped to shape modern science by values our culture calls masculine.[12,13] At a time when the control of nature was seen as inseparable from economic and industrial progress, he effectively cast the description of science, its methods and goals, in gendered and sexual terms and metaphors that are with us to this day: he saw mind as male and nature as female, a mystery to be unveiled, penetrated and controlled. Woman as reproductive being embodies the natural, the disordered, the emotional, the subjective, the irrational; man as thinker epitomizes objectivity, rationality, culture and control. Bacon saw science as "a chaste and lawful marriage between Mind and Nature"; nature was to be subdued, dominated and controlled.[14] In his time the witch mania was at its height and reflected fears of female sexuality and woman's uncontrolled nature. Reason and science promised protection against the dangers of woman.[15] These dualisms and metaphors have had great importance in the molding of gender stereotypes in western cultures as well as in the structuring of science as male, both conceptually and organizationally.

The eighteenth century saw a renewed interest in defining sex differences in every part of the human body. Drawings of skeletons reflected anatomists' idealized versions of the male and female body and of masculinity and femininity. The skeleton of a woman was to reflect the "harmony of her limbs, beauty, and elegance," in the words of the anatomist Soemmerring.[16] Schiebinger relates this scientific interest in idealized femininity to the dilemma generated by the rise of liberal political thought and the growth of democratic tendencies in the eighteenth century from which women were conspicuously excluded. In the ongoing controversy between those advocating equality for women and those committed to women's continuing subordinate position within the home, nature, in the form of anatomical sex differences, provided a justification for evolving definitions of the position of women.

The anatomical preoccupation with sex differences continued unabated into and through the nineteenth century. Women came to be seen by some anatomists as evolutionarily arrested in their full "human" development, as this was exemplified by the white male. The

common thread in anatomical descriptions of women in this period was their likeness to children — delicate, weak and underdeveloped in their bones, muscles, nerves and blood vessels, and consequently, of course, incapable of intellectual, abstract or analytical work. The lesson from anatomy was constantly drawn by physicians, scientists and philosophers to the effect that, as one physician, J. J. Sachs, put it, the "weak, soft members and delicate skin are witness of woman's narrower sphere of activity, of home-bodiness, and peaceful family life."[17] Leading philosophers of this period, from Rousseau in the eighteenth century to Comte and von Humboldt in the nineteenth century, insistently invoked nature, the findings of science, for the resolution of the problems posed by those advocating equality of the sexes: it was woman's natural (anatomically demonstrated) role as wife and mother that provided the foundation of a stable social order.[18]

Further, as Schiebinger points out, this ongoing eighteenth- and nineteenth-century scientific and philosophical effort was occurring during the period that witnessed the gradual displacement of women midwives from the delivery of health care to women and the determined efforts to exclude women from professional training either as midwives or as physicians in the established medical schools. As Judy Leavitt[19] has shown, with the increasing use of forceps by physicians in the eighteenth century; the institution of obstetrical training for physicians, also in the eighteenth century; and finally, the introduction, on women's insistence, of anesthesia to childbirth in the mid-nineteenth century, women with the economic means increasingly chose to include physicians in the birthing process, since modern medicine promised some protection against both the pain and the high risk of death in childbirth. (Midwives, however, still attended approximately half the births in the United States in 1900.) That the physicians they chose were, with few exceptions, male physicians reflected the previous century and a half struggle women and the male medical establishment over the exclusion of women as midwives and physicians from the scientific amd medical training that became required for professional standing and for acceptance by the growing middle and upper classes.

Then, by the latter half of the nineteenth century, women in both England and the United States were behaving very badly. As the historian Carroll Smith-Rosenberg so richly describes in her book *Disorderly Conduct,*[20] this was a period of radical social and economic

change brought on by the commercial, transportation and industrial revolutions of the first half of the century. There was the rapid development of an industrial and commercial working class and an urban poor alongside the commercial and industrial elite. Stimulated by urban social dislocations and in the face of the bourgeois Cult of True Womanhood, the Victorian ideal of femininity, women were getting out of the home and organizing social reform movements and philanthropic societies; opening refuges, asylums and schools; speaking on public platforms; writing tracts and publishing pamphlets; criticizing marriage and divorce laws; trying to limit their pregnancies and family size and to enter universities and medical schools and male professions, finally opening their own colleges and medical schools.[21,22]

As Smith-Rosenberg has described, American medicine met the challenge to prove women incapable of what they were in fact doing and wished to do. Physicians proclaimed women to be nothing but the product and prisoner of their reproductive system. The female physiology "determined all of a woman's other physical and social experiences. . . . To thwart the requirements of the reproductive organs was to court disease, insanity, and death."[23] These medical wisdoms were based on theories: an intimate connection between ovaries, uterus and nervous system was the basis for the popular "reflex irritation" model of disease causation. Any imbalance, exhaustion or other disorder of the reproductive organs could cause pathological reactions anywhere in the body. The writings of the physician Edward Clarke, a professor at Harvard, had a strong influence on educators in the late 1800s. He strongly propounded the belief that women had a limited amount of energy, and to use it on education would divert essential energy from their reproductive system, ruin their health and jeopardize the lives of future generations by bearing sick, neurotic and degenerate children. Describing educated women, Clarke said, "The results are monstrous brains and puny bodies . . . flowing thought and constipated bowels."[24] A New York physician wrote, "The delicate organism and sensitive and highly developed nervous system of our girls was never intended by the Creator to undergo the stress and strain of the modern system of higher education, and the baneful results are becoming more and more apparent as the years go by."[25]

Complementary to nineteenth-century physicians' luridly imaginative descriptions of women's physical and mental disabilities were the dedicated efforts of nineteenth-century European brain anatomists to

demonstrate the inferior and undeveloped state of the brains of females and blacks by doing elaborate measurements, all of which were later shown to be invalid. Anthropologists and brain scientists made the connections between their craniological investigations and women's radical aspirations quite clear when Paul Broca, the eminent neuroanatomist and leader in the field of craniometry (the science of skull measurements), in 1868 urged anthropologists to study the "condition of women in society" since women's unchecked militancy threatened to produce a "perturbance of the races."[26] And the anthropologists answered the call. In the words of J. McGrigor Allen in 1869, "No distinctions in the minds of men and women! Nature flatly contradicts the absurd assertion, and warns against encouraging this foolish and mischievous flattery of women. . . . As it is these doctrines have a most baneful effect in unsettling society. . . . Thousands of years have amply demonstrated the mental supremacy of man, and any attempt to revolutionise the education and status of women on the assumption of an imaginary sexual equality, would be at variance with the normal order of things, and as Dr. Broca says, induce 'perturbance in the evolution of races.'"[27] He challenged anthropologists to investigate the question of women's mental, moral and physical qualities. Such challenges had already begun to stimulate the application of the flourishing science of craniology (measurements of the skull) to the question of both gender- and race-related differences, and craniological techniques had served to "demonstrate" the constitutional inferiority of blacks and, thus, the justification for slavery.[28] The purported craniological "findings" in the brains of black men and white women were constantly juxtaposed and compared with those of children, in order to reinforce the concept of the arrested development of both blacks and women. Darwin, writing in his *Descent of Man* in 1871, cited the work of Carl Vogt (*Lectures on Man,* 1864) and other anatomists to make this connection for the female brain: "Male and female children resemble . . . the mature female much more closely than the mature male. The female, however, ultimately assumes certain distinctive characters, and in the formation of her skull, is said to be intermediate between the child and the man" (Part II, p. 317).

To solve the woman problem, the best brain scientists of their day (including both Vogt and Broca and their colleagues) went to desperate lengths — manipulating measurements for cranial height, length, width, volume, brain weight, body height and weight, facial angle or

angle of the vertebral column — measuring *anything* in order to get the numbers *to come out right;* that is, to construct an infallible index of the inferiority of women's brains as the basis for their hopelessly inferior intellect. Alas, it was all for naught as Karl Pearson and his students finally, at the turn of the century, buried forever the "science" of craniology with their application of rationality and rigorous statistical standards. But, before its demise and as if to emphasize the real-life concerns that craniology was hoping to solve during its heyday, Topinard, Broca's chief disciple, in 1888 gave his evolutionary explanation for differences in male and female brains:

"The man who fights for two or more in the struggle for existence, who has all the responsibility and the cares of tomorrow, who is constantly active in combatting the environment and human rivals, needs more brain than the woman whom he must protect and nourish, than the sedentary woman, lacking any interior occupations, whose role is to raise children, love, and be passive."[29]

The most extreme expression of the scientific misogyny rampant in the science of the time came from one of Broca's colleagues, Gustave LeBon, who wrote in 1879:

"In the most intelligent races, as among the Parisians, there are a large number of women whose brains are closer in size to those of gorillas than to the most developed male brains. This inferiority is so obvious that no one can contest it for a moment; only its degree is worth discussion. All psychologists who have studied the intelligence of women, as well as poets and novelists, recognize today that they represent the most inferior forms of human evolution and that they are closer to children and savages than to an adult, civilized man. They excel in fickleness, inconstancy, absence of thought and logic, and incapacity to reason. Without doubt there exist some distinguished women, very superior to the average man, but they are as exceptional as the birth of any monstrosity, as, for example, of a gorilla with two heads; consequently, we may neglect them entirely."[30]

Unfortunately, LeBon was not, Steven Gould notes, a marginal figure or a crackpot but a leading scientist of his time and a founder of social psychology, well known for his study on crowd behavior.

Freud, in the late nineteenth and early twentieth centuries, continued the Aristotelian portrait of woman as passive and as a hopelessly flawed, incomplete and mutilated male, with the added attributes of narcissism and masochism. To achieve femininity, the mark of maturity

and normality for females, it was necessary for a girl both to transfer sexuality from the clitoris to the vagina and to transform her penis envy and longing (another Aristotelian First Principle) into longing for father as lover and for his baby. But even that outcome, though the best for her, was not a truly successful one, since it did not completely resolve her Oedipal complex, leaving her, though feminine, with a weak superego, lacking in a sense of justice or morality. But, on the other hand (the Freudian no-win situation for women), if she did not even achieve that degree of success, she was in a worse state, being developmentally arrested in a stage of neurotic infantile masculinity. Her wish to be a man will reemerge in the form of neurosis — by definition, any manifestation on her part of deviance from Freud's norm of femininity.

So, there we have it again. To Aristotle and Hippocrates we can add the lustrous names of Broca, Darwin and Freud, all considered to be brilliant thinkers and observers who could analyze so well. But when they came to the problem of women and of gender, they lost their critical faculties and distorted or invented data to fit their hopes, beliefs and theories.

In the middle decades of the twentieth century, behaviorists dominated the field of psychology and the emphasis was on learning rather than biology as the source of psychological sex differences.[31] The tide began to turn, however, by the mid-1960s as psychologists along with neuroendocrinologists and other neuroscientists began, once again, a determined effort to find biological bases in our genes, hormones and brain structure and function for presumed gender-related differences in cognitive abilities. Doubtless aware, however, of the growing women's movement of the late 1960s and early 1970s, psychologists were careful to express appreciation of the feminine virtues and the value of traditional female roles they feared women would soon abandon.

According to Eysenck, "For women to deny these differences and to seek for a purely masculine role in their efforts to achieve 'equality' is to deny the values of the specific feminine contribution to society; by seeking equality in precisely those fields where nature has seen fit to endow men with greater capacities than women they make certain that women will quite definitely be inferior to men. It is by capitalising on those areas where nature has seen fit to endow women with greater capacities than men that women can establish their position as equal but different complements to men. They may find that if they cannot

beat nature, they might benefit by joining it."[32] How remarkably sanctimonious and patronizing for someone writing in 1973. But this is precisely the main message of E. O. Wilson's sociobiology, introduced to the world in 1975 and expressed succinctly by David Barash in 1979: "Because men maximize their fitness differently from women, it is perfectly good biology that business and profession taste sweeter to them, while home and child care taste sweeter to women."[33] And the political intent of the message was driven home by Trivers in the film *Sociobiology: Doing What Comes Naturally*: "It's time we started viewing ourselves as having biological, genetic and natural components to our behavior, and that we start setting up a physical and social world to match those tendencies."

Two psychologists, Garai and Scheinfeld, writing in 1968, found that those "natural components" of women just happen to fit them perfectly for the jobs they were doing: their tactile sensitivity "may contribute to their greater manual dexterity and early in life direct them towards activities which require manual skills such as sewing, knitting, embroidery, dental laboratory work, and microscopic research in biology and biochemistry. . . . Women also appear able to profit from their greater tolerance of monotony in these job assignments where they may derive their main satisfactions from affiliative on-the-job relations with their fellow workers." They excel "in the perception of details in tasks which require frequent shifts of attention, such as typing, filing, checking lists for accuracy and other clerical skills."[34]

Sociobiologists and other biological determinists were able to incorporate the new concepts developed in the flourishing field of behavioral neuroendocrinology in the 1960s and 1970s. From work on cyclicity and mating behaviors in rodents, the concept of the "organizing" effects of testosterone on the fetal brain in determining adult behaviors was enthusiastically and universally accepted and became the paradigm for thinking about human behaviors. Ideas about rats' brains and behaviors were uncritically extrapolated to human brains and behaviors. Presumed, though undemonstrated, effects of testosterone on the fetal brain were widely accepted as accounting for gender-associated differences in "aggressivity," the meaning of which in our society includes such characteristics as intelligence, imagination, independence, and ambition. Testosterone-induced unbridled aggressivity in the human male became the attractive explanation for the more unpleasant aspects of our social behaviors: war, homicide,

random violence and male dominance.

Though no evidence whatsoever exists, fetal testosterone has been recently credited by a noted neurologist with inhibiting fetal development of the left brain hemisphere, resulting in right hemispheric dominance in males[35] and "superior right hemisphere talents, such as artistic, musical, or mathematical talent."[36] Consonant with a 2,000-year legacy, women, without adequate testosterone, are incomplete, deprived, mutilated.

Finally, in the 1980s, neuroscientists have returned to measuring brain structures in the hopes of finding *the* structural basis in the brain for presumed gender-associated differences in cognitive functions. This has become a ruling paradigm in the neurosciences. There is no doubt in my mind that the intense interest over the past two decades in finding gender-related differences in the brain and in cognitive abilities is directly related to the contemporary women's movement, a response and reaction to women's moving out of traditional roles and responsibilities of service to men and into male spheres of intellectual, professional and political accomplishments.

The focus has been mainly on the question of hemispheric lateralization in cognitive processing. The dominant theory holds that women tend to use both hemispheres in the processing of visuospatial information, whereas men are more lateralized to the right hemisphere. In spite of the absence of any evidence whatsoever, the dominant theory *assumes* that right hemispheric lateralization of visuospatial functioning is superior to bilateral processing of visuospatial information. As is usual, the assumption is that, however it is that women are, it is the inferior way to be. The emphasis is on visuospatial ability since it is seen as especially critical for success in such fields as science, mathematics and engineering — the areas that are and have been male preserves.

A major problem in the enterprise of finding biological bases in the brain for presumed gender differences *either* in cognitive abilities or in hemispheric lateralization of cognitive processes is that the existence itself of such differences is questionable and highly controversial, as at least five recent reviews document in great detail.[37–41] They show that the body of literature on gender differences in spatial ability is seriously flawed, that as many published studies find no gender differences as do find them, and that a fair proportion of studies finding no gender differences is never published. The variation *within* each sex

is far greater than the variation *between* them, and, thus, makes virtually meaningless the concept of *gender or sex difference.* In his review of the literature on cognitive sex differences, Hugh Fairweather (1976), a leader in the field, concluded, "It must be stressed, finally, that the majority of studies reviewed here and elsewhere are both ill-thought and ill-performed. . . . We cannot pretend that we are testing a theory of sex differences, since at present none can exist."[42]

I want to review, as an exemplary modern case study of the biological construction of women's inferiority, one particular paper because its purported finding of the first structural sex difference in the human brain was rapidly incorporated into the neuroscientific literature as an established fact despite its many scientific flaws that resemble those of the previous two millennia in their crudeness and their appeal to faith in first principles (also known as unsupportable assumptions).

The study reported in *Science* in 1982 a larger and more bulbous splenium of the corpus callosum in women.[43] (The corpus callosum is in the brain of all mammals and is a sheet of nerve fibers or *axons,* the long processes of neurons that make functional connections with other neurons in the transmission of information, connecting the two hemispheres. Viewed from the midline, the callosum is a clearly delineated structure and the portion toward the back of the brain is known as the *splenium*).

The study was based on only fourteen brains (nine male, five female) obtained at autopsy, with no specification of age of patients, cause of death, or mode of selection of the particular fourteen brains from all available autopsy specimens. These important methodological questions were particularly troublesome since, first, the authors stated that they undertook measurements of the callosum *after* the "serendipitous" observation, in the course of examining many brains for other purposes, of a sex difference in the shape of the splenium; second, the reported distribution of values for splenial maximum width for males and females was completely bimodal — i.e., mutually exclusive — a statistical improbability for any biological parameter (except reproductive) in *randomly* selected populations of males and females; and, finally, the authors attributed "wide-ranging implications for students of human evolution, as well as for neuropsychologists in search of an anatomical basis for possible gender differences in the degree of cerebral lateralization,"[44] an overblown interpretation for a study based on only fourteen brains and with a reported sex differences in the area

of the posterior fifth, defined by the authors to be representative of the splenial surface area, that was not statistically significant ($P = 0.08$). Now, in order to make a bulbous splenium the "anatomical basis for gender differences in the degree of lateralization," the authors made certain specific assumption, for which there is absolutely no evidence: that size of splenium reflects the number of axons passing through it and that splenial size is directly related to the degree of symmetry of hemispheric functioning. Thus, on the basis of a series of unsupported assumptions, the authors speculate that their "results are congruent with a recent neuropsychological hypothesis that the female brain is less well lateralized—that is, manifests less hemispheric specialization —than the male brain for visuospatial functions." With the suggestive phrasing, "less hemispheric specialization," the authors leave it to the reader to draw the obvious implication that they have found the biological basis for the presumed inferiority of girls and women for visuospatial functions.

With all its basic scientific flaws — an unstated methodology in sample selection and an unacceptable sample size, unsupportable assumptions leading to overblown interpretations, a "finding" without a minimum standard of statistical acceptability — *Science* found this paper important enough to publish. That the flawed methodology of the study produced flawed results has been amply demonstrated by the failure of four subsequent studies independently to confirm the finding of a gender-related dimorphism in the splenium.[45–48] (Bleier et al., 1986; Demeter et al., 1985; Weber and Weis, 1986; Witelson, 1985b).

In the light of what is known today about the corpus callosum and cognitive functions in general, it is not possible to correlate callosal size or shape with any cognitive functions. Nothing is known about the significance, if any, of the enormous individual variations that exist among corpora callosa, nor is there any knowledge about the functions of the callosum in cognitive processes, or, of course, what relationship there might be, if any, between variations in callosal size and shape and variations in cognitive functioning.

Furthermore, with all the insights into how individual neurons process information from the outside world—like sound or light waves—there is a huge and possibly unbridgeable gap between that kind of knowledge and an understanding of such profound questions as how do we think, what are the processes of learning and memory, what is

consciousness, what brain structures or processes account for intelligence or for genius or for great ability in math or music. That is, if we had Einstein's or Mozart's brain to analyze, we would not even know what questions to ask of it or where to look or how to go about finding the site of either one's genius. In the light of this profound ignorance about the most basic elements of human cognition, it is utterly ludicrous to claim *any* particular cognitive significance whatsoever for *any* characteristics of the corpus callosum. The attempt to correlate callosal morphology with cognitive functioning is reminiscent of the efforts of nineteenth-century craniology to find significance in the size and shape of the bumps on the human skull. Measuring bumps on the corpus callosum will not bring us any closer to the truths of human intelligence. We are still mired in the naive hope that we can find something that we can *see* and *measure* and it will explain everything. It is bad science in the service of ideology.

I have drawn a very negative and depressing portrait of science and medicine, of scientists and physicians using their presumed knowledge and authority to deny woman her full personhood. It is a negative and depressing, often foolish, litany of women's biological inferiority: the construction of Woman as limited by her biology to the performance of only those tasks that, by some coincidence, our society had, already and long ago, assigned her. It is a story of society, through its scientists and physicians, struggling to preserve the gendered *status quo* and to legitimize it as natural and unchangeable.

It leaves us with a number of important questions to ask and attempt to answer: How can it be that some of the great minds in science and medicine—Aristotle, Hippocrates, Darwin, Broca, Vogt, Freud—brilliant in their abilities to see and conceptualize, not only were blind on the subject of women and gender but violated their own standards of intellectual rigor by concocting facts to fit their theories? How could they not see the elementary and obvious connection between the inferiorities in women's accomplishments that they described compared with those of men and their own refusal to allow women to be educated and to be free to develop their potential for such accomplishments? *Or* is it the point that they *did* indeed see and did very well understand the implications of what they saw and what they *had* to say?

If this is true, what does this tell us about science and medicine and knowledge in general that can be so shaped and distorted by cultural

bias and ideology and the self-interests of scholars? It certainly tells us that we have inherited an enormous and enduring edifice of male-constructed knowledge about Woman, an edifice designed and destined to serve as the ideological framework for a set of social relations and a system of power and privilege based on a sexual and gendered hierarchy known as patriarchy.

But there is the other side to this story. Clearly there have *always* been women—many women—who have been impelled by their own energies, intelligence and aspirations toward their own defined goals, who were not, in themselves, defeated by the weight and power of patriarchal authority and institutions and ideologies. Were that not the case, there would have been no need for the constant exertions and impositions of that authority through institutions and ideologies, of which science and medicine have been an important part.

It is possible that the game is up. Not only are women in increasing numbers ignoring or violating the "natural order" of things but they are also beginning to catch on to the social values and subjective meanings built into scientific truths. Both women and science will be the better for such change.

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Remarks Made at the Rededication of the Grave Site of Dr. Benjamin Rush Christ Church Cemetery Fifth and Arch Streets Philadelphia, Pennsylvania Sunday, April 26, 1987

J. WOODROW SAVACOOL

Honor a physician according to thy need of him with the honors due unto him, for verily the Lord hath created him. For from the most high cometh healing and from the king he shall receive a gift. The skill of a physician shall lift up his head and in the sight of great men, he shall be admired. The Lord created medicines out of the earth and a prudent man will have no disgust at them. And he gave men skill that they might be glorified in his marvellous works. With them doth he heal a man and taketh away his pain. With these will the apothecary make a confection and his works shall not be brought to an end. And from him is peace upon the face of the earth. My son, in thy sickness be not negligent but pray unto the Lord and he shall heal thee. Put away wrong doing and order thine hands aright, and cleanse thine heart from all manner of sin. Then give place to the physician, for verily the Lord hath created him; and let him not go from thee, for thou hast need of him. There is a time when in their very good hands is the issue for good. For they also shall beseech the Lord, that he may prosper them in giving relief and in healing for the maintenance of life.

Ecclesiasticus 38, vs. 1–14

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Sketch of Dr. Benjamin Rush

WHITFIELD J. BELL, JR.

Benjamin Rush, as this ceremony fully demonstrates, has not wanted for remembrance and honor by the medical profession. As a member of the first faculty of the first medical school in North America, he taught thousands of students during a career of more than forty years; wrote on a score of topics in medicine, including old age; and is hailed as the father of American psychiatry. And if he is best — or rather, notoriously — known for his sanguinary prescriptions in the yellow fever, he was also admired and praised for his unselfish, heroic care of his patients in the epidemics of that disease.

But Rush's career and contributions went beyond medicine and deserve no less to be remembered. Stimulated by the great public events of his generation, he proposed and promoted a dozen schemes to improve and perfect men and society. In these endeavors he displayed much of the best in the American national character and aspirations.

Throughout his life he was a reformer. As early as 1772, when he was twenty-six, he wrote a recommendation of temperance in eating and drinking and of physical exercise; and he remained an unremitting foe of distilled liquors, urging his fellow citizens to refresh themselves instead with beer or cider, which he called "Federal drinks." He was, of course, an opponent of slavery, supported the Pennsylvania abolition acts of 1780 and 1788, and, as a practical means of undermining the economic base of slavery, promoted the manufacture and consumption of maple sugar (the product of free labor in the North) instead of cane sugar (raised and harvested by Negro slaves). He opposed capital punishment, which he called murder, and also the current practice of public punishments.

Appreciating that the new American republic could succeed only if its citizens were educated, Rush worked unceasingly in that cause. He was full of ideas about the content and methods of education; he was the principal founder of two colleges — Dickinson and Franklin (and Marshall) in Pennsylvania—and sketched a national system of colleges and state universities, with a national university at the top, where young men would be trained for public service. Women, he believed,

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must also be well educated: he was a trustee of the Young Ladies' Academy, where he lectured to the students on science and chemistry.

It is easy to fault him. He wrote too much too hastily. He was too often carried away by enthusiasm (but they were generous enthusiasms). Like many liberal-minded reformers, he could be self-righteous, self-pitying, intolerant of opposition. Yet he was a patriot, a lover of his country and of what his country might be. He knew that America's strength lay not alone (or even primarily) in armed might, but in the character of its citizens, their self-discipline and sense of public obligation. Indeed, he suggested that, as the government had a War Department, it should also have a Peace Department.

It is therefore entirely proper that we praise him here today. But let two men who knew him well have the last word.

"A better man than Rush could not have left us," wrote his friend Thomas Jefferson on receiving news of Rush's death, "more benevolent, more learned, of finer genius, or more honest." To which John Adams replied, "I know of no character living or dead, who has done more real good in America."

The Bicentennial of the College of Physicians of Philadelphia

LEWIS L. CORIELL

It is appropriate that we gather together today to rededicate the grave of Dr. Benjamin Rush in this bicentennial year of the College of Physicians of Philadelphia. Dr. Rush helped to create this society of concerned physicians, and to set it on its path with the mission of advancing medical science, promoting high ethical standards in the profession, encouraging the exchange of medical information and acting as a guardian of the public welfare. These goals, so vital and relevant in 1787, remain so today.

Medicine and society have changed dramatically over the past two hundred years. The yellow fever epidemics that swept through the city are gone. But new epidemics are with us. Medical education has changed from apprenticeship to extended periods of university and clinical training. But the need for continuing education, to keep up with the latest discoveries, remains. The collection and preservation of medical knowledge was an early goal of the college, which opened a library after receiving a gift of sixteen books. Today, the library holds countless volumes and serves the medical and lay public in ways the founders could never have envisioned. Rush, an outstanding scholar and humanitarian, knew the value of medical history. Today, the college contains an institute dedicated to interpreting contemporary issues in historical perspective.

Thus the college of physicians, after 200 years of service, is fulfilling the aims of its founders and providing medical, educational and cultural services its early leaders could not begin to imagine. In short, the College of Physicians of Philadelphia is an institution with a proud history and a promising future. Its first two centuries have been marked by challenges and achievements that would make Dr. Rush very proud.

By rededicating his grave site, we reaffirm our commitment to the noble humanitarian and scientific goals he espoused 200 years ago.

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Our new federal government is very acceptable to a great majority of our citizens and will certainly be adopted immediately by *nine* and in the course of a year or 18 months by *all* the States. When this shall happen, *then* to be a citizen of the United States *with all its consequences* will be to be a citizen of the freest, purest, and happiest government upon the face of the earth. It contains all the theoretical and practical advantages of the British Constitution without any of its defects or corruptions. While the nations of Europe have waded into order through seas of *blood,* you see we have traveled peaceably into order only through seas of *blunders.*

Benjamin Rush, M.D., letter to John Coakley Lettsom, Philadelphia, December 28, 1787, p. 443. From *Letters of Benjamin Rush,* edited by L. H. Butterfield, Volume 1, 1761–1792. The American Philosophical Society, 1951.

REVIEW

SANDBLOM, PHILIP. *Creativity and Disease. How it Affects Literature, Art and Music.* Third Edition. 143 pp., illus. Philadelphia: George F. Stickley Co., 1987. Price $18.95.

Reviewed by JONATHAN E. RHOADS

Creativity and Disease could have been written by no one I know except Philip Sandblom. The author is a Swedish surgeon who has had three distinct careers, in each one of which he has been conspicuously successful. As a young surgeon he studied the healing of wounds and made the important observation that the latent period of wound healing could be shortened by a previous wound correctly timed. He became the Professor of Surgery at the University of Lund. Later he devoted himself professionally to the study of the biliary tract and to the causes and treatment of bleeding from the liver. He coined the term "hemobilia" and drew together his observations and experience in an important monogram on this subject.

His second career was as Rector Magnificat (roughly the Swedish equivalent of President) of the University of Lund. As such he guided the University through a vast expansion that perhaps tripled the number of students it served.

His third career was as a critic and lover of art, which he began as a very young man and continued into his maturity. He and his wife and constant companion, Grace, developed one of the finest private collections in western Europe with special emphasis on the French Impressionists.

In this small volume he displays a profound knowledge of the personal lives, writings and utterances of a great number of artists. He also reveals a deep understanding of composers, playwrights, novelists and poets and of the personal lives of many of them. From this wealth of knowledge he evokes an impressive grasp of the interrelations of illness and art. He traces the great range of reactions of artists and writers to their illnesses and to their physicians, concluding as follows:

> It seems that the urge and endeavor to achieve an original creation, to immortalize a personal conception, may overcome even extreme morbidity. In great artists, the passion to create generates a will power, strong enough to defeat the worst disease.

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The Third Edition not only refines the earlier editions but adds more illustrations and important revisions of the text. It combines objectivity and sensitivity so beautifully that such a work would endow Philip Sandblom with success achieved in the fourth career — that of a writer. With its carefully selected illustrations, many in color, it is a joy to read.

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REVIEW

WEAR, A., FRENCH, R. K., and LONIE, I. M., eds. *The Medical Renaissance of the Sixteenth Century.* 349 pp. Cambridge, England: Cambridge University Press, 1985. Price $59.50.

Reviewed by JAMES T. GOODRICH

This work, which came about as a result of a conference in Cambridge, England, on sixteenth-century medicine, was written by some of the scholars who took part. The text is eminently readable and contains a great deal of interesting new information.

Charles B. Schmitt, for example, in "Aristotle Among the Physicians," examines the question as to how sixteenth-century philosopher-physicians viewed their various contributions. Earlier, the doctrines of Aristotle had been assimilated into Western medical thinking. This had followed the previous approach of the Salerno method, which had been more practical as distinct from the "refinements" of philosophy. From the thirteenth through the seventeenth centuries scholars in Bologna and Padua viewed philosophy as a useful discipline for physicians in training and turned to the writings of Taddeo Alderotti (1215–1295) and Pietro D'Abano (1277–1315). In his book, *The Conciliator,* D'Abano cited the value of logic, natural philosophy and astrology, intimating that natural philosophy, in providing theoretical knowledge, strengthened the physician's hand in treatment. *Ubi enim desinit physicus, ibi medicus incipit* (Where the natural philosopher finishes, there begins the physician).

The report that follows by Dr. Nancy Sirasi analyses sixteenth-century Latin editions of *The Canon of Medicine* by Avicenna, which had appeared in at least sixty partial or complete editions between 1500 and 1674. In both chronology and content these reflect changing views of Avicenna. Dr. Sirasi suggests that Italian editors shared several common goals—to present the *Canon* pragmatically, in a way that would be of use to students and teachers of the period and to bring humanistic concepts to bear on the work. Particularly interesting is the gradual shift in editors' views from early adulation to citations of "Avicenna's errors" while attempting to reconcile tradition with innovation in evaluating this great prince of physicians.

I particularly enjoyed an essay by Dr. French on Berengario da

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Carpi, whose text, while lacking elusive commentary, yet dealth firmly with basics. The essay gives us a vivid picture of what the study of anatomy was like in Padua before the days of Berengario, together with a discussion of Hellenistic teaching and Berengario's introduction of "secundum manuelem operationem" or anatomy conducted by hand. Implicit here was a questioning of authority, e.g., Galen. Berengario, in commentary format, presented his views on the anatomical design using nothing more than practical logic in the form of "demonstrations."

Continuing, Dr. French considers Berengario's *Commentary on Modinus,* the first printed, illustrated anatomical text of any length, reflecting the author's concept of "anatomia sensibilis" or anatomy of visible things, the need for sensory experience or simple anatomical illustration. How, for example, could the shape of a vertebral body be described with words alone? This work clearly puts Berengario among the major contributors to the pre-Vesalian era of anatomical pedagogy.

Dr. V. Nutton's essay, "Humanistic Surgery," begins with an interesting statement. "The modern historiography of renaissance surgery resembles a moral fable concocted out of ignorance and tralatitian prejudice." It was Dr. Nutton's view that during this period the gulf between physician and surgeon was not as wide as has been supposed, the surgical text of the *Hippocratic Corpus* having become available in the latter third of the sixteenth century and having become the standard in the university milieu. The author also reports that Galen's surgical works had only recently been translated. Enthusiasm for him had apparently begun to wane, based on the observation that the deeper one explored his texts the more one came upon unopened pages and fewer marginal notes. Despite this, the reintroduction of the classical text provided some new material for the would-be surgeon.

The paper by Dr. Iain Lonie, "Paris Hippocratic," examines the academics of that city in the second half of the sixteenth century, members of one of the most influential teaching centers in the Western world. Authorities such as Duret, Jacques Houllier and Guillaime De Baillou, deeply influenced by the "Doctrina Hippocratica," set the tone for Paris medicine.

An instructive report by Dr. Luis Garcia-Ballester dealt with the Morisco Practitioners, a sixteenth-century Spanish group, a subculture of Moors converted to Catholicism about 1500. This led to an inter-

esting fusion of Arabic Medicine with Galenism which, unfortunately, declined into quackery and inferior standards of learning.

In conclusion, I recommend this thoughtful and well-written summary of medical thinking in the sixteenth century. The articles are, without exception, well done, and it is a pleasure to see such accounts emerge from a conference. My only criticism is of the book's uninspired format. It is surprising to see hardcovers laminated with clear plastic presented by one of the world's most respected presses. Considering the price of the book, a better binding would have been highly appropriate.

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Julian Johnson
1906–1987

JONATHAN E. RHOADS

Dr. Julian Johnson died on March 1, 1987, at Waverly Heights, the retirement community to which he had moved the previous year.

He was one of six children of a Baptist minister who served several congregations. He attended Maryville College in Tennessee, where he met his future wife, also the child of a minister, then moved to Philadelphia to attend the School of Medicine at the University of Pennsylvania, where he was elected to Alpha Omega Alpha. Following graduation in 1931, he took a two-year rotating internship at the Hospital of the University of Pennsylvania. It was his desire to be a surgeon; but, as there was no opening in the Fellowship Program in general surgery that year, he accepted an appointment as the Thyroid Fellow on the service of Dr. Charles Frazier while attending as well the patients of Dr. I. S. Ravdin, who had a rather limited general surgical service at that time. It had been agreed that he would have his fellowship with Dr. E. L. Eliason, on whose service he spent the ensuing five years at the Hospital of the University of Pennsylvania. Arrangements had been made for those Fellows who wished to complete work for the Doctor of Medical Science degree in the Graduate School of Medicine. He completed this with a comprehensive thesis on the Physiology of the Liver and Biliary Tract.

It was my privilege as his intern to assist him at his first thyroidectomy, during which I said to myself that he did a better operation than most of the senior members of the staff. He was, indeed, a natural surgeon with extraordinary coordination of mind and hand. He was assigned responsibility for the thoracic surgical service at the completion of his residency and, except for the years 1942 to 1946 when he was on active duty in the Army, he ran this service until he retired in 1972.

There were many innovators in the field of thoracic surgery at the time, and a few of them seemed to feel it more important to do something new than to offer their patients the advice and services that would have been most certainly in the patient's interest. Julian Johnson never succumbed to this temptation and, in commenting on one of

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these individuals years later, he explained to me that you can't both fly high and keep your feet on the ground. He kept his feet on the ground and progressively reduced mortality rates in pulmonary and cardiac surgery.

Dr. Johnson was essentially a self-taught cardiothoracic surgeon, since neither Dr. Frazier nor Dr. Eliason was much involved with thoracic surgery. At the end of his period of formal training in general surgery he went to Boston, where he watched Dr. Edward Churchill at the Massachusetts General Hospital and Dr. Richard Overholt, formerly a trainee of Dr. George Mueller at the Hospital of the University of Pennsylvania, who was then doing a great deal of thoracic surgery at the Lahey Clinic. He also visited Montreal and observed the work at the Royal Victoria Hospital. On returning home, he undertook to do lobectomies, pneumonectomies, thoracoplasties, and the drainage of empyemas and of lung abscesses. In his first thirty pneumonectomies, he had only one death, establishing a lower mortality rate than any of the series then reported around the country.

Dr. Johnson very early undertook intrathoracic operations for mitral stenosis. In citing Charles Bailey, who was one of the pioneers in this field, he said that, in the use of various instruments that were plunged through the left ventricular wall and then expanded in the mitral valve, he had become convinced that resulting incompetence of the valve was seldom more beneficial than the original stenosis and that he had finally given up such efforts. He credited Bailey with having thought of opening the valve at the commissures by actually introducing his finger through the auricle. He went on to repair coarctations of the aorta and to ligate the patent ductus arteriosus. On one memorable morning, while televising an operation from the Hospital of the University of Pennsylvania to the Convention Center for the American College of Surgeons, he exposed the ductus and explained to the audience that this was the point at which there was danger that the ductus might rupture, at which point this accident occurred. He very quickly clamped the torn edges of the ductus and oversewed them, to the admiration of the audience for his coolness and effectiveness. When the operation of Blalock and Taussig for children suffering from the tetralogy of Fallot was introduced, he mastered the technique, and Dr. Blalock referred many local patients to him. He corrected diseased valves, inserted artificial valves as they were developed and remained in the vanguard of thoracic and cardiac surgery up to the time when

bypass grafts were developed. At this point he encouraged his senior colleague, Dr. Horace MacVaugh, to assume the main responsibility for developing this field at the Hospital of the University of Pennsylvania. During the period before his retirement he was one of only two or three of the original group of American surgeons to develop thoracic surgery who was still active in the field.

Dr. Johnson was firmly of the belief that, to be a good surgeon, one should be a good physician and that to be a good cardiothoracic surgeon, one should be a good general surgeon. He remained a most effective teacher in general surgery and played an important role in the training of all the general surgeons at his hospital.

His professional status was early and widely recognized. He was chosen vice-president of the American Surgical Association in 1955; was elected president of the Society for Vascular Surgery in 1960, and in 1962 was elected president of the American Association for Thoracic Surgery, the highest honor that can come to a man in this discipline. He was president of the Philadelphia Academy of Surgery for two terms beginning in 1970. He earned a reputation of being a tough taskmaster in the hospital, expecting perfection from his surgical team and convinced that his residents should foresee problems before he did. He was noted for being able to foresee difficulties, and here it was hard to keep up with him. He attracted and trained a long series of extremely able residents in cardiothoracic surgery and general surgery.

Perhaps he was best known for his useful textbook, *Surgery of the Chest,* which first appeared in 1952, beautifully illustrated by Edna Hill and under the joint authorship with the late Charles Kirby. Johnson carried it on through a second, third and fourth edition with the varying collaboration of Dr. Horace MacVaugh and Dr. John Waldhausen. Subsequently, he turned it over to Dr. Waldhausen, and it has been published through a fifth edition as *Johnson's Surgery of the Chest.*

When Dr. Ravdin became the John Rhea Barton Professor of Surgery at the University of Pennsylvania, he established two surgical services: Service A with Dr. Johnson as Chief and the B Service with Dr. Jonathan Rhoads as Chief. Later, when it was proposed that I might serve a term as department chairman, I talked to Julian about it and he said he would support me, which he surely did through that dozen years.

In 1952, with Dr. Ravdin's encouragement, we went before a court-appointed master to ask for approval for the incorporation of the Buckingham Mountain Foundation, a charitable organization of which Dr. Ravdin was the president until his health failed and of which Dr. Johnson became president and served up to the time of his death. Dr. Johnson was the largest contributor to it, and the Board was composed of the three grantors and their wives. In the thirty-five years of its existence, it has provided or will provide approximately a million dollars for various projects at the University of Pennsylvania and a considerable sum of money for other objectives, mainly in the field of education.

The type of surgery Dr. Johnson did was arduous and high risk. He wanted to stop while he was still in his prime. He retired, as I recall, three days before his sixty-seventh birthday, well prepared to do so by his deep interest in gardening and his equally deep interest in hunting, particularly for birds. He had a well-deserved reputation as an excellent shot. He and Dr. Paul Mecray and later Dr. Sargeant Pepper and a few other friends had a farm with wetlands in southern Jersey, fronting on the Delaware Bay. He would often spend two or three days at a time maintaining their cabin, cooking meals for his friends, raising fresh vegetables on the arable land and shooting ducks when in season.

During the war he served four years with the 20th General Hospital, the University of Pennsylvania Army unit, in the easternmost part of India, Assam, at the base of the Burma Road. He became vice chief of the Surgical Service under Dr. Paul North and did a great deal of the surgery.

Julian's dominant quality was integrity. He was not only honest; he was also fair. He was a keen observer, extremely intelligent, conscientious to a fault, often staying in the hospital with ill patients overnight. Beyond all of this, he was generous — to his college, of which he became a Trustee; to his university; and to his many friends and relatives. He is a prime example of the man described in the parable in the book of Matthew who was given five talents by his master and had doubled them by the time his master returned. In his every effort, he enjoyed the enormous support of his devoted wife, Mary Benn Johnson, who survives him with their daughter, Joan.

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DEPARTMENT OF RETROSPECTION

The Blockley Politician

JOHN C. DaCOSTA

Let me sketch for you the Blockley politician as I knew him, and as some of us may know him in the future, if he is ever again permitted to dominate here.

He was strictly practical. He never chased any rainbows. He had no ideals. He regarded reform as the maunderings of the imbecile or the obsession of the wicked. He liked to speak of "snivel" service reform. He was a true Bourbon, who learned nothing and forgot nothing. There was never the remotest chance that he would undergo a change for the better. He was like a canal-boat horse, so used to walking on the level lowlands that you could never teach him to mount a hill.

The views of these persons were well voiced, on one occasion, by the superintendent. I referred him to Scripture for the statement that a good name is better than great riches, and he said: "That may be all true, but it does not carry so many divisions." The Blockley politician was as utterly insensible to all criticism as a stone dog would be to a vote of thanks. The only thing he was afraid of was the anger of the great boss; and he would fly from that like an ignorant savage frightened by a comet, and might fall into a hole as he ran. He always had a great deal of improper pull, and never enough reasonable and judicious push. He was always puffed up by deceit, but not propped up by it. He resembled a corkscrew in the fact that the more crooked he was, the more pull he had. You could no more expect a really good thing from him than you could expect to get peaches from a gate post or beefsteak from a nightmare. He was from 5 feet 6 to 5 feet 10 high, and from 10,000 to 20,000 dollars short. As a rule he could consume a considerable amount of liquor. He was apt to boast that whisky never gave him a head, which only goes to prove that whisky is not more powerful than the Almighty.

If he had possessed a coat-of-arms it would have been a plain, ordinary crook. He was called a "Poor Guardian," probably because he did some of the poorest guarding on record. He was always liable to take a trip to Canada on the advice of his lawyer, and not of his physician;

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for he was prone to have a leg in the board room and one in the Eastern Penitentiary. Like Leonidas, he held a pass; but it was a railroad pass, and even his pulse beat with a dead beat. He never wore gloves, and I do not know why his critics should do so. He seldom wore cuffs, and his wrists always presented a neglected and undecorated appearance without handcuffs. He was apt to boast that he was self-made, and I always regarded it as noble of him to assume the responsibility. He kept his party faith, and everything else he could get his hands on. His parents were poor, but Irish. He was skilled in the fundamental branches of addition, subtraction, division, and silence, and in the gentle domestic arts of perjury and blackmail. When he saw a "divvy" going on in the neighborhood he could cry out as did Hotspur:

> I am on fire
> To hear this rich reprisal is so nigh, and yet not mine.

DaCosta, J. C. 1931. *Selections from the Papers and Speeches of John Chalmers DaCosta, M.D., LL.D.,* pp. 165–66 and 424. Philadelphia & London: W. B. Saunders Company.

ACADEMIA

Items of Interest from Philadelphia Medical Centers

Hahnemann University. *Alan Jay Schwartz, M.D.,* is to serve as associate dean for Medical Affairs and will continue as senior anesthesiologist at the Children's Hospital of Philadelphia.

Arthur T. Meyerson, M.D., has been appointed professor and chairman of the Department of Mental Health Sciences.

The Medical College of Pennsylvania. A Distinguished Service Award has been given to *James G. Bassett, M.D.,* in recognition of his thirty years of service to the institution. The new short procedure unit has been dedicated to Dr. Bassett and Donald R. Cooper, M.D.

Garrett E. Bergman, M.D., has been elected president of the Medical/Dental staff for 1987/88.

June F. Klinghoffer, M.D., has been named the first Ethel Russell Morris Professor of Medicine.

At its annual meeting the Society of Biological Psychiatry elected *Wagner H. Bridger, M.D.,* president.

Harry Gottlieb, M.D., has been elected chairman of the Medical Board of the hospital.

The first Henrietta Ottinger Huston Macfarlane Scholar in Obstetrics and Gynecology is to be *Carolyn Beth Hadley, M.D.*

Thomas Jefferson University. Announcement has been made of the appointment of *Sergio A. Jimenez, M.D.,* as director of rheumatology research and professor of medicine.

The university has been given a $4.7 million grant to study epidermolysis bullosa. The program, funded by the National Institutes of Health, will be supervised by *Jouni Uitto, M.D.,* professor of dermatology.

Paul C. Brucker, M.D., has been elected president of the American Board of Family Practice.

The American Society of Clinical Hypnosis has elected *Louis L. Dubin, D.D.S., Ph.D.,* president.

The University of Pennsylvania School of Medicine. *George F. Murphy, M.D.,* has been named professor of dermatology and pathology and will direct the Diagnostic Laboratory of the Department of Immunodermatology.

The Medical Center has been given $3 million by the National Institutes of Health to study osteoporosis, one of three centers in the country so designated.

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11. I certify that the statements made by me above are correct and complete

SIGNATURE AND TITLE OF EDITOR, PUBLISHER, BUSINESS MANAGER, OR OWNER

John L. McClenahan

PS Form 3526 July 1982

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INFORMATION
CONSERVATION, INC